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Table of Contents on Page 2

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Table of Contents

Vol. 28 November 1953 No. 11

ARTICLES

The Matching Program for Intern Placement —*John M. Stalnaker* 13

Schedule of Dates for 1954-1955 Intern Matching Program 20

New Approach to Undergraduate Teaching of Psychiatric Problems of Children —*S. Harvard Kaufman, Herbert S. Ripley* 21

The Challenge to Medical Education in the Second Half of the 20th Century —*Sir Lionel Whitby* 26

What Is Education? —*Sir Richard Livingstone* 34

EDITORIALS AND COMMENTS

Physicians and Personnel Shortages 40

A New Markle Grant 41

A "First" for the Journal 42

Our Readers Write 42
Match On!

SPECIAL SECTION

Report on the Sixty-Fourth Annual Meeting 43

NEWS DIGEST 55

College Briefs 58

AUDIOVISUAL NEWS 65

BOOK REVIEWS 71

ABSTRACTS AND EXCERPTS 75

THE PERSONNEL EXCHANGE 77

Calendar of Meetings 6

Index to Advertisers 6

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The Matching Program for Intern Placement

JOHN M. STALNAKER

THE SECOND official year of operation of the matching program for intern placement was even more successful than the first. The nationwide cooperative program was somewhat better understood and the support of both students and hospitals was general. All hospitals approved for internship training except 25 cooperated in the program.

This report explains briefly what the matching program is and gives some detailed results for the operation during 1952-53 (for internships which started July 1, 1953).

The matching program has been developed to provide a sound and orderly procedure for intern placement and to facilitate sound advisory procedures. It is fair to both hospital and student. Fundamental to the matching program is the freedom of both student and hospital to establish contact with each other and independently to arrive at a judgment of relative merit. Both student and hospital then submit to a central clearinghouse confidential lists—in the case of the student a confidential list of his preferences among the hospitals to which he freely applied, and in the case of the hospitals a list of the order in which they prefer the applicants who have been attracted to that hospital.

Each hospital is tentatively matched with the men it ranks highest on its list to the extent of the number of men being sought. If these men preferred this hospital over the others to which they applied, the matching is permanent. If a man applies to several hospitals, as most applicants did, and is ranked high by all of them, the man is permanently matched with the hospital he prefers. When a man is permanently matched with a hospital, his name is removed from the tentatively accepted list for the other hospitals and these hospitals are then tentatively matched with the next name on their list. This process is repeated until all men are permanently matched as far as possible.

Defined simply, the principles of matching are these:

1. The student gets the highest internship on his list that has an opening for him.

2. Whether or not an internship is open to him is determined by whether or not the internship can be filled with men the hospital ranked higher than it ranked him. If it cannot, and they will accept him, he is matched.

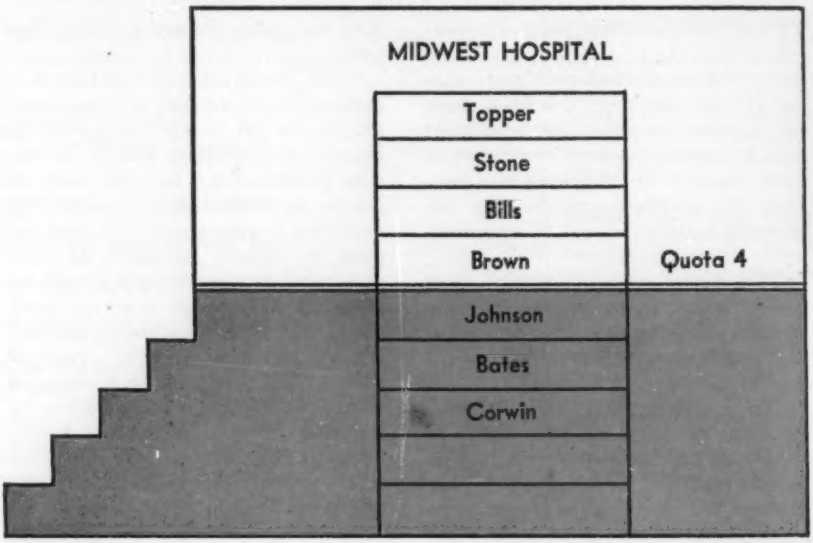
Thus, there are only two possible reasons for a student not receiving his first choice internship. They are

Mr. Stalnaker is director of operations of the National Intern Matching Plan and director of studies for the Association of American Medical Colleges.

that the internship is filled by men preferable to the hospital, or that the hospital marked him X (meaning it did not want him in any case). The only way a hospital can be matched to any given man on its list, is when the man rates it his first choice or he is unable to receive any other internship he prefers.

The principle process of the matching can perhaps best be explained by a pictorial ladder or set of steps:

Stone cannot be bypassed on the ladder, but if he can get his first choice hospital, which is on another "ladder," he is removed from this ladder. If Stone is within, or *moves* within the quota in his first choice hospital, he jumps off the Midwest ladder, since he can definitely get into a hospital he prefers to Midwest. Bills and Brown move up a notch and make room for another man (Johnson) in the quota part of this ladder.



Here Midwest Hospital has ranked its seven applicants in the order in which they are shown on the ladder. They offer four internships. Topper, Stone, Bills and Brown are ranked highest by the hospital. If all of these four men have ranked Midwest their first choice, they are immediately "matched" to Midwest, and Midwest is filled. Johnson, Bates and Corwin must seek elsewhere, since the hospital was filled with men it preferred. Suppose, however, that Stone has ranked Midwest his second choice,

This type of movement is occurring on some 1,000 different internship ladders in the matching program. As soon as a man gets within a quota at a hospital of his choice, his lower choices are removed from the ladders on which they are holding rungs, permitting movement upward of lower men on those ladders. No choice is removed unless the man is definitely "in quota" at a choice he prefers, or unless the hospital is filled by men it prefers.

As with any new program of na-

tional scope and of some complexity, not all students and hospitals appreciate the values of the matching program or recognize how it operates. As a result, some infractions of the simple but necessary regulations may result. Such infractions are assumed by some hospital administrators to be more widespread than they are, and also when they occur they are falsely assumed to give the guilty hospital or student distinct advantages.

Neither hospital nor student should demand from the other a promise that he will rate the active first or top level. Such promises are not necessary and may work to the disadvantage of the person demanding the illegal promise. However, so long as the discrepancy between the number of approved internships and the number of available men is as large as it is today, some hospitals unfortunately will do virtually anything to obtain a full quota of interns. The very large majority of the hospitals, however, act in good faith and infractions of rules are much smaller than believed and, in most cases, are based on ignorance of the rules and not a desire to act unfairly toward other hospitals in the matching program.

THE PARTICIPATING students—6,033 in number—reported 19,416 applications for internships—about 3.5 applications on the average for each student. Under the free system which is fundamental to the matching program, some hospitals attracted a plethora of applications while others attracted not a single one. The matching program does not "give" applicants to any hospital, or restrict a student in any way from applying to any participating hospital which interests him. Free enterprise operates fully.

Of the 19,416 applications for internships reported, the hospitals either did not rate the student or marked him X (not desired) in 2,281 instances. The students after applying to hospitals decided in 2,843 instances they did not wish to intern at the hospital and, therefore, rated it X (not acceptable). In some 608 cases included in the foregoing figures, the student and hospital each rated the other X. Thus, of the 19,416 applications reported, 4,516 or almost a quarter of all applications made were removed from the matching process by the request of the student or the hospital (or both). There were 14,900 applications considered in the actual matching operation.

Of the 6,033 students in the program, 5,744 were matched. Some 85 per cent (4,873) were matched with their first choice hospital, an additional 10 per cent (580) were matched with their second choice hospital and 3 per cent (183) with their third choice hospital. The remaining 108 students (2 per cent) were matched with lower choices, one being matched with his 10th choice, most of his higher choice hospitals having marked him X which removed him from consideration at that hospital.

There were 289 students unmatched. These students were unable to find acceptance by any of the hospitals to which they applied. An analysis of this group shows that five of them marked all of their hospitals X, indicating that they did not wish to be matched. Of the remaining 284, there were 133 who applied to only one hospital. The hospital in 70 per cent (92) of these cases rated the individual X or not acceptable. In the other 41 cases (30 per cent), the student applied only to a hospital which filled its quota with men it preferred according to its confidential rating blank.

In addition to the 133 unmatched

students who applied to only one hospital, there were 67 who applied to only two hospitals, 36 to three hospitals, 22 to four hospitals, and so on down to two unmatched students who applied to 12 hospitals.

The total unmatched group of 289 reported 635 applications. The hospitals in 239 instances gave the applicant an X rating and the men applied —in 389 cases—to hospitals which were filled by men preferred by the hospital. In seven cases, the men marked the hospital to which they had applied X.

All but seven of the medical schools had one or more men unmatched and three medical schools each had 10 or more men unmatched.

All hospitals approved for internship training except 25 participated in the matching program. The program included 808 hospital units. This count allows only one unit for the Navy, for example, and one unit for the Syracuse Medical Center, etc. These 808 hospitals offered 10,971 internships.

The frequency with which each type of internship is offered and the number of interns sought and obtained is shown in Table 1. The matched interns filled only 53 per cent of the available vacancies. About 88 per cent of the interns sought are for general rotating internships, including rotating with various emphases. The next most popular internship type is straight medicine, but only 6 per cent of the total applicant group were matched with internships in straight medicine. All straight internships together account for only 11 per cent of the internships filled through the matching program.

The balance between interns sought and internships filled was the closest for straight medicine, where 68 per cent of vacancies were filled: 530 such internships were offered and 359 students were matched with them.

Of the 1,102 different hospital internships offered, 390 or 35 per cent were not matched with a single intern, 500 or 45 per cent received one or more interns, but not the full quota sought, and only 212 internships were completely filled.

Putting these same statistics in terms of interns sought, it may be noted that of the 10,414 interns sought, 1,651 (15 per cent) were sought by hospitals not being matched with any interns, 7,126 (65 per cent)

TABLE 1

The Type and Number of Internships Offered and Filled through the Matching Program

Type of Internship	No. of Hospitals Offering	No. of Interns Sought	No. of Interns Matched	Per Cent Matched
ROTATING GENERAL	741	9,299	4,861	52%
ROTATING EMPH. MED.	28	100	54	54%
ROTATING EMPH. SURG.	31	121	53	44%
ROTATING OTHER EMPH.	33	83	30	36%
MIXED TYPES	34	183	94	51%
STRAIGHT MEDICINE	73	530	359	68%
STRAIGHT SURGERY	64	377	194	51%
STRAIGHT PEDIATRICS	37	144	67	47%
OTHER STRAIGHT	61	134	32	24%
TOTALS	1,102*	10,971	5,744	52%

*There were 808 hospital units in the matching program; some hospitals offer more than one type of internship.

TABLE 2

Extent of Obtaining the Interns Sought Related to the Stipend Offered

Amt. of Stipend	100% FILLED			67-99% FILLED			50-66% FILLED			34-49% FILLED			1-33% FILLED			0% FILLED		
	Hospital	INTERNS Sought	Filled	Hospital	INTERNS Sought	Filled	Hospital	INTERNS Sought	Filled	Hospital	INTERNS Sought	Filled	Hospital	INTERNS Sought	Filled	Hospital	INTERNS Sought	Filled
$ None	9	142	142	5	163	146	2	15	8	4	125	56	—	—	—	—	—	—
1- 25	6	111	111	19	716	589	11	327	189	7	188	85	9	239	54	5	30	—
26- 50	12	222	222	17	425	338	11	149	80	6	105	41	15	277	40	22	180	—
51- 75	21	529	529	11	193	161	12	298	160	6	109	41	32	494	75	32	279	—
76-100	19	207	207	22	304	246	14	145	80	14	184	76	55	570	97	86	523	—
101-150	23	216	216	32	447	351	17	147	80	12	168	65	40	362	75	67	433	—
151-200	13	208	208	9	134	105	16	143	78	4	97	40	27	246	57	21	124	—
201-250	3	57	57	4	29	22	1	10	5	2	28	11	3	28	7	7	28	—
251-300	1	5	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Over 300	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
No information	—	—	—	1	21	18	1	2	1	—	—	—	—	—	—	1	4	—
TOTAL	107	1,697	1,697	120	2,432	1,976	85	1,236	681	55	1,004	415	181	2,216	405	241	1,601	—
Fed. Serv.	5	497	497	—	—	—	1	40	20	3	90	37	7	108	16	3	50	—
GRAND TOTAL	112	2,194	2,194	120	2,432	1,976	86	1,276	701	58	1,094	452	188	2,324	421	244	1,651	—

were sought by hospitals which received some, but not the full number sought, and 20 per cent (2,194) were sought by hospitals which obtained their full quota.

Of the 5,744 interns matched, 62 per cent went to hospitals receiving only part of the interns they sought, and 38 per cent (2,194) went to hospitals which obtained their full complement of interns.

The *Journal* of the AMA in its internship and residency number gives the stipend specified by the hospital as available to the intern. Table 2 has been prepared to show the relationship between stipend listed and the extent to which the quota of interns sought is filled. About 37 per cent of the hospitals with filled quotas pay a stipend of more than $100 monthly, whereas only 14 per cent of the hospitals paying $25 a month or less were filled. Of the 243 hospitals receiving no interns at all, some 40 per cent offer stipends of more than $100 monthly. While there is some positive relationship between stipend and obtaining interns, the relationship is one which suggests that other factors may be more important.

Table 3 gives the relationship between the size of the intern staff sought and the extent to which the interns were obtained by the matching program. About half of the hospitals seeking fewer than 10 interns received no interns, and less than 10 per cent of these hospitals were filled. All hospitals seeking 30 or more interns received some interns and 22 per cent of them were filled. It would appear that the small hospital, seeking less than 10 interns, is the one which is not now attracting enough applicants or impressing them with the quality of the internships it offers. Of the 808 hospital units in the program, 403 sought fewer than 10 interns, and 202 of these did not obtain a single intern through the matching program.

These 403 hospitals with relatively small intern staffs are largely (344 or 85 per cent) unaffiliated with medical schools, and 180, or a little over half of these small unaffiliated hospitals, received no interns while only 23, or less than 8 per cent, were filled.

Of the 32 small hospitals which are classed as major teaching hospitals, 10 obtained no interns but nine were filled completely. There are 27 which are classed as minor teaching hospitals. Nine of these were filled completely and 10 were left without a single intern.

TABLE 3

Hospitals Classified by the Number of Interns Sought and the Degree of Success in Being Matched

	PER CENT OF INTERNS SOUGHT WHO WERE OBTAINED						
Interns Sought	Filled 100%	Filled 67-99%	Filled 50-66%	Filled 34-49%	Filled 1-33%	Filled 0%	Total
1- 9	34	36	33	13	85	202	403
10-19	54	42	33	25	80	37	271
20-29	9	15	9	7	12	5	57
30-39	7	14	6	7	6	0	40
40-49	1	6	4	5	4	0	20
50 up	7	7	1	1	1	0	17
TOTAL	112	120	86	58	188	244	808

TABLE 4

The Number of Hospitals, the Number of Interns Sought and the Number Matched Classified by the Hospital Affiliation and Degree of Obtaining Interns Sought

Per Cent Filled	MAJOR TEACHING			MINOR TEACHING			NON-AFFILIATED			TOTAL		
	Hospitals	INTERNS Sought	Matched	Hospitals	INTERNS Sought	Matched	Hospitals	INTERNS Sought	Matched	Hospitals	Sought	Matched
100%	39	897	897	11	177	177	62	1,120	1,120	112	2,194	2,194
67- 99%	40	1,419	1,153	13	162	133	67	851	690	120	2,432	1,976
50- 66%	18	543	304	7	109	57	61	624	340	86	1,276	701
34- 49%	17	450	194	8	170	64	33	474	194	58	1,094	452
1- 33%	23	480	95	20	233	42	145	1,611	284	188	2,324	421
0%	12	87	——	20	205	——	212	1,359	——	244	1,651	——
	149	3,876	2,643	79	1,056	473	580	6,039	2,628	808	10,971	5,744

A final table, Table 4, classifies the hospitals according to affiliation with a medical school and the extent to which they fill quotas. Of the 5,744 interns matched, the major teaching hospitals obtained 46 per cent, the minor teaching hospitals 8 per cent, and the unaffiliated hospitals 46 per cent.

The matching program does not advise students or recommend one hospital or hospital type over another. For some reason, it would appear the students are not now being attracted to the small unaffiliated hospitals for intern training. The statistics collected by the matching program do not show why this condition exists. If students want to go to such hospitals for intern training, and rate such hospitals as their first choice, then the picture will change.

If a hospital is not matched with a single intern, the hospital can properly conclude that not one intern applicant acceptable to it has rated it as his first choice. Any hospital participating in the matching program receives all applicants it attracts, and it will accept those applicants who rate that hospital first choice up to the limit of the number of interns it seeks.

The matching program does not attract interns for hospitals or distribute interns among the hospitals on the basis of any preconceived master plan. No student is ever matched to a hospital unless he has stated that he desires to intern there more than at any other hospital available to him. No hospital receives any intern it has not stated it wants. The matching program does not control the factors which influence students to desire one hospital over another. Neither does it influence hospitals in making their decision regarding which of their applicants they want.

The matching program in reality is merely a clearing-house for bringing together the freely expressed but confidential desires of the student with the freely expressed but confidential hospital rankings of their applicants. The matching program acts as the agent for both student and hospital. The student always receives the internship he most desires and which is available to him. If a hospital has more applicants available to it than it can accept, it always receives the men it prefers. In brief, the matching program is an orderly method of intern placement. The widespread support of students and hospitals which it has received suggest that it is filling a need.

National Intern Matching Program, Incorporated

Schedule of Dates

for

The Official Cooperative Plan of Internship Appointments for First-Year Internships for 1954-1955

1. OCTOBER, 1953. Hospital directory published, containing the number of internships offered, and the description, at each participating hospital. This information will also be published in a late September issue of the *Journal* of the AMA.
2. OCTOBER, 1953. Student directory published containing name and medical school of each participating student.
3. OCTOBER, 1, 1953-JANUARY 10, 1954. Period for students to make application for internship to hospitals. The student should file a copy of his application with the dean's office, as well as one directly with the hospital. The office of the dean will send this copy of the student application to the hospital at the same time he submits the student's credentials and the recommendations. Students are urged wherever possible to apply before December 19, 1953.
4. OCTOBER 1, 1953-DECEMBER 10, 1953. The deans may send letters of recommendation to the hospitals at any time after October 1, 1953, but insofar as possible letters should be sent by December 10, 1953, so that the hospitals may have this information when the students are interviewed.
5. FEBRUARY 1, 1954. Closing date for receipt at central office of student and hospital confidential rank order lists. The student list should be submitted as early as the senior has definitely decided about the exact rank order of the hospitals.
6. FEBRUARY 18, 1954. Confidential student list is confirmed to student. Confidential hospital list is confirmed to hospital.
7. FEBRUARY 22, 1954. Closing date for accepting (in Chicago) corrections to student or hospital confidential rank order lists.
8. FEBRUARY 23, 1954. Matching operation begins.
9. MARCH 13, 1954. Results of the matching plan are mailed from Chicago to students and to hospitals.
10. MARCH 15, 1954. Results are given to students by deans. Hospitals receive results.
11. MARCH 15-25, 1954. Hospitals send contracts to matched students and students sign and return the contracts.

New Approach to Undergraduate Teaching of Psychiatric Problems of Children

S. HARVARD KAUFMAN and HERBERT S. RIPLEY

THE TRADITIONAL child guidance clinic has been a training center as well as a community service clinic from its inception. Training always has been specialized, however, and limited to students in psychiatric social work, clinical psychology, more recently public health nurses and, of course, graduate physicians studying child psychiatry.

It has been established by theory and experience that the more adequate a clinic is in the main jobs of diagnosis, consultation and treatment of disturbed children and their families, the better it is in its auxiliary or secondary function of teaching. Clinic personnel always have jealously maintained this balance even though sometimes there has been pressure to alter it.

From time to time, especially in those clinics closely related to or part of a medical school, the inclusion of undergraduate medical students in the clinic teaching program has been suggested, and that kind of teaching has been handled in several ways with varying success. Case demonstrations and attendance at carefully selected staff meetings have been tried. The use of clinic personnel in giving lectures has been popular. Child psychiatrist participation in pediatric seminars, grand rounds, consultation services and assisting in well-baby centers has become the routine in many medical teaching facilities.

The inclusion of the medical student in the comprehensive teaching program of a child psychiatric clinic, however, has been rejected as inconsistent with the structure and philosophy of the clinic. Clinic staffs have felt that undergraduate, nonspecializing students want to observe casually and assume no responsibility and, therefore, are not suited to participate as members of the clinic team.

However, in a medical school program that is based on the philosophy of teaching medical students comprehensive nonspecialized medicine so that they begin to see their patients as individuals with families rather than receptacles for diseased organs, a facility that will help them understand family interrelationships seems to be an essential part of such a program. The problem, then, is offering the student participation in such an experience without destroying the means for it. Of course, some of this can be secured on other child services to a limited extent.

Some contact with the psychiatrist in pediatric and well-baby clinics is helpful. Here the emotional problems of the parents, as well as disturbed family situations as they relate to the

Dr. Kaufman and Dr. Ripley are members of the staff of the School of Medicine of the University of Washington.

personality structure and behavior problems of the children seen, are discussed with the medical undergraduates. In instances where it is feasible, the medical student has an opportunity to spend a good deal of time with the parents of these children and actually—as is done at the child health center on the University of Washington campus—to make home visits. At the health center he then has conferences with the pediatrician, the social worker and the psychiatrist.

In this way much is learned of the normal variations in growth and behavior that may present ordinary problems when dealing with children and their families, in pediatrics and in other branches of medicine or surgery as well. This is an important part of undergraduate training in medicine in that it gives the student understanding of the common problems of growth and development.

As in the general practice of medicine, however, some of the emotional problems of children may go beyond the ordinary disturbances recognized as part of the usual developmental changes. Some of these extraordinary cases are selected for presentation at staff meetings at which the pediatrician and child psychiatrist share the moderator role and an attempt is made to help the student express his understanding of the problems involved in both the parents and child. He is assisted by members of other disciplines whose evaluations and impressions are discussed. The dynamics are elicited and some plan of treatment and future procedure planned.

This program is not new, but neither is it usual. The approach is usually so different than that seen on the ordinary pediatric ward or in the ordinary pediatric dispensary that the students have mixed feelings as to its value. However, most expressions of opinion are positive and it is important to point out that this service is concomitant with that at the child psychiatric clinic. It is also interesting to note that in our experience the more the pediatrician participates and the better oriented he is in the problems of emotional growth, the more acceptable this kind of discussion is to the medical student.

Value of Examination

Regardless of the value of the participation of the medical student in this kind of conference, the fact remains that the patients discussed are not necessarily those seen by the medical student. It was felt, therefore, that even though the student has a limited capacity to understand the subtle factors involved in observing and eliciting psychopathology in the examination of children, an opportunity of doing so, even in a limited way, would have infinite value because of the direct involvement of the student with the patient and because it is consistent with the program of bedside teaching in all his other clinical experience.

It meant, therefore, that the student should be involved in the actual examination of patients. The program could be accomplished best at the psychiatric clinic for children. This would serve two purposes: (1) the learning of a new process, which involved communication with children, and a beginning in understanding children's methods of defense and supervised help in organizing the responses observed so that they become meaningful syndromes; (2) the interview with the mother would help in understanding not only the meanings of developmental historical events, but the observation and evaluation of

the individuals presenting this material and, finally, the synthesization of the whole as it relates to the problems presented by the child.

It was felt that this experience would seem to be essential to third-year medical students so that they then could relate their understanding of some of these problems of infancy and childhood to the adults they would see throughout their clinical years. However, there was a question whether junior medical students were ready or would have developed the necessary skills that would enable them to make the evaluation necessary to benefit by this experience, and warrant their participation as adjunct members of the clinic team.

There was no solution to these problems without a trial period. As a result, junior medical students were selected in the fall of 1949 with the proviso that, because of the reasons outlined, they should see only the parents and children who had already been "worked-up," and then sit in on the diagnostic staffing of the cases thus examined. Because this plan was unsuccessful, only a brief description of the procedure will be outlined.

The clinical years in 1949 at the University of Washington were limited to a maximum of 50 students. The curriculum was divided into four quarters of 10 weeks each, leaving about 12 students in a section during a quarter. In the psychiatric clinic for children, one-half of these were at the clinic one afternoon a week for 10 weeks, which meant that on two occasions six students would participate in the teaching program for three hours one afternoon weekly.

Through their first and second year, their experiences in psychiatry were as follows: during the first year, a 35-hour course in psychobiology designed primarily to give the student an understanding of growth and development and normal behavioral variations; during their second year, a 22-hour course in psychopathology and participation in a 12-hour course in history-taking and psychiatric examinations which actually was a conjoint course given by the clinical departments. During their third year, 30 hours each of adult psychiatry and psychosomatic medicine was offered, but since the participation of the students in the psychiatric clinic for children ran throughout the year, we can only consider their backgrounds as delimited by their lectures and seminars during the first two years.

An attempt was made during the first four three-hour periods at the clinic to discuss with the students the common psychiatric disturbances in children, the role of the parent and a review of the developmental studies they had in their first year. Following this examination, a conference was held with the total staff at the clinic, utilizing the materials from the referring agencies, the various participating disciplines within the clinic and the interviews of the students. An attempt then was made to come to a diagnostic conclusion with therapeutic recommendations, and to include the students in participation and formulation of these conclusions. This experiment in teaching child psychiatry created anxiety in many of the students. It fomented a mild rebellion among members of the clinic staff who projected their own anxieties onto the students and produced some doubt on the part of referring agencies as to whether the clinic was really capable of offering adequate community service.

It was obvious that we had gone

too fast and expected too much of the medical students. The first group that came in the fall had no clinical experience with any kind of patient before coming to us. We asked them to participate in a complicated diagnostic procedure for which they literally had no background. They were exposed to diagnostic impressions on children whom they thought not too ill and with whose parents they identified. And finally, their discussion of psychopathology in individuals they did not think very ill produced anxiety in the students and a real threat to their status as individuals. In the fourth-quarter group were students who were finishing their third year and who had other psychiatric courses before, so that the experience became more positive in character. Nevertheless, at the end of the first year of teaching medical students within the psychiatric clinic for children, our community relationships had become strained and the social work and psychological staffs were convinced that the experiment was a failure.

However, even if the students had not, we had learned a great deal. Two facts were outstanding: (1) there was an increasing acceptance of psychiatric principles and examining procedures concomitant with the increasing clinical experience of the medical students, and (2) the complicated diagnostic procedure was too sophisticated for the undergraduate. This combination led to the present set-up for fourth-year students, which we feel has not only proved workable but has resulted in real changes in the attitude of the students.

At the present time, the senior class has 75 students and is divided into four quarters of 10 weeks each. When the student is assigned to child psychiatry in the clinic, it is during the quarter in which he also has his obstetrical and gynecological experience and his pediatric clerkships. The student is assigned one three-hour afternoon period per week for the 10-week period. The number of students each session varies between six and nine. Prior to coming to the clinic, he has had the 67 hours of psychiatry during his first and second years. He has had a four-week externship in a psychiatric hospital. He has had 30 hours of bedside teaching in adult psychiatry and psychosomatic medicine. He has had 32 hours of discussion sessions on general psychiatric problems. He also has had the experience of his third year of clinical clerkships in all branches of medicine and surgery, and concomitantly he is on the child health center well-baby service. Instead of cases that have been worked-up, patients used for medical student participation are new applicants.

Orientation in child psychiatry begins during part of the students' second and third-year seminar sessions. The child psychiatrist discusses with them some of the principles involved in the understanding and treatment of disturbed children and their families. In the third year they also have included in their course on psychiatric problems a series of discussions on the psychiatric problems of children.

During the first three-hour session they are in the clinic, the psychiatrist, psychologist and social worker spend the afternoon discussing the role of the several disciplines comprising the clinic team, their interrelationships and the way in which the student fits into the team. The psychiatrist emphasizes the student's responsibility as part of the clinic team while he is on the service.

Methods of interviewing mothers are reviewed, emphasizing not only the eliciting of facts but the observation of the mother as a patient, her responsiveness and the student's reactions, and a reemphasizing of the importance of certain developmental data. The psychiatrist also reviews the examination of the child, the meanings of certain types of behavior in the interviewing situation, the use of play materials and the meanings of games. The students are taken into the playroom, toys and techniques are described, questions are answered and every attempt is made to help the student feel a part of the clinic team.

The second session is spent in discussing a new patient and then observation through a glass screen of the examination of the child by a psychiatrist. At the same time, a social worker interviews the mother.

By the third week the students are ready to participate in their own examinations. Each group of two students is assigned a patient and a psychiatrist supervisor.

Prior to the examinations, the student goes over the material available with his assigned psychiatrist. An attempt is made to help the student understand some generic and dynamic factors involved.

After the examinations are completed, the students spend the remainder of their period in a discussion of their interviews and the probable differential diagnosis and plans of procedure. The results of the examinations and discussions are presented to the entire staff at a later date. Follow-up interviews are held and subsequently the cases are handled just as other cases admitted and not seen by medical students.

During the last session with the students, the psychiatrist spends an extra period of time with them, answering questions that came up during the quarter and were not covered during the other sessions of that period. This period is valuable in helping the student relate what he has learned to the general understanding of children.

It is the feeling of the department that the experience the student has had in the psychiatric clinic for children helps him understand total family situations and is carried over to his other clinical experiences.

With careful planning, there was no instance of a mother refusing to have her child examined by a medical student or refusing to participate in her interview. In only two instances have mothers asked a student whether he is a physician or a medical student. In no instance has the teaching procedure interferred with the clinic's relationship to agencies or other institutions in the community. As a result, students developed more insight and participated more readily in pediatric staff conferences.

It has been found, therefore, in these three years of study that the students can participate. They can become part of the clinic team and the experience gained seems to give them a much better understanding of the patients in other medical wards. This, in the end, seems to be the best criterion of success of the program, since its purpose was not designed to emphasize child psychiatry as a specialty, but rather to emphasize the understanding of psychiatric problems of children in the comprehensive medical school teaching program.

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The Challenge to Medical Education in the Second Half of the 20th Century

SIR LIONEL WHITBY

Published on the following pages are two of the papers presented during the First World Conference on Medical Education, held August 22-29 in London. Sir Lionel Whitby's President's Address and Sir Richard Livingstone's paper were read at the first plenary session. Both are reprinted, by permission of the editors, from the August 29, 1953, issue of the *British Medical Journal*.

THE TITLE OF my address has not been framed as a question, since there can be no doubt that the second half of the 20th century offers a challenge to medical education, as indeed it offers a challenge to every variety of medical experience, to every aspect of medicine, and to the practice of medicine in every part of the world.

It is for me to examine the nature of the challenge and for you to listen in the coming week to speakers from all over the world who will make their contributions to our discussions, and who, though having in mind the general issue, will nevertheless instruct us in some of the particular difficulties of their own countries and conditions. For perhaps the first abiding value of this conference may be that we shall know more of each other and each other's conditions. There can be little doubt that when we individually think of medical education we think only of our own countries.

The world, however, has now become so shrunken, because of modern communications, that we can no longer take a parochial view of our problems, whether they be economical, political, social or, above all, medical, since medicine mercifully knows no international boundaries and happily has the same ideals in all countries. Even when countries are at war their medical professions can cooperate and be at peace one with another in a common task. Fortunately, there is a growing worldwide awareness of the common bonds of medicine and the contributions which these can make to world peace.

The World Health Organization of the United Nations and the medical offshoot of UNESCO, C.I.O.M.S., both intergovernmental in constitution, are a formal international recognition that medicine, health, science, and education present common world problems which can, in part, be faced and partially solved by men and women from different countries meeting together and expressing their views. Medical men themselves have realized the challenge by founding the World Medical Association, and I am proud to know that in this the British Medical Association has

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played a prominent part. The World Medical Association represents the field workers, those who have to do the job.

It would indeed be unusual, if not an indication of inertia and ill-health, if the practicing doctors did not have their disagreements with intergovernmental planners. We regard the scene from different standpoints, and I can understand at least this much of Einstein's theory of relativity, that what is observed depends upon the position of the observer.

It is perhaps significant that the first great project of the World Medical Association is the holding of the First World Conference on Medical Education, and it is also significant that it has secured the willing collaboration of the World Health Organization, whilst the support and interest of the International Association of Universities can only mean that the sure foundation of medical studies is the university and the university idea.

The Challenge to Education

The first challenge which has come to the fore in the second half of the 20th century is not confined to medical education, but is leveled at education itself, whatever calling or profession a man or a woman is to take up. The basic trouble is the same as with medicine, that the accumulation of knowledge is such as to demand early specialization and to make it impossible for a student to be comprehensive in his approach to his subject.

Abraham Flexner said that medical education was not so much a matter of medicine as of education. It is fortunate, therefore, that Sir Richard Livingstone, who has probed deeper than any of us into the meaning and purpose of education, has paid us the great compliment of coming to address a gathering of doctors and to give us the benefit of his wisdom.

It is also fitting that Professor Fulton, who has made the physiology of the brain his special study, should follow Sir Richard Livingstone and speak on his other special interest, that of medical history, telling us of the background of the theme of the conference under the title of "The History of Medical Education."

And then, several thousands of miles from New England, Colonel Mallick comes from Pakistan to speak on the parting of the ways between the medicine of this century and before that time. Is medicine a technology or a profession? And if the answer is clear, as I think it is, then how must we educate youth to respond to the challenge implicit in this conception of our common faith?

In preparing for any calling there are challenges from three directions. These are directed at the teachers, at those they teach, and at what they teach. These aspects therefore form the basis of three of the main sections for the conference, whilst the fourth, preventive and social medicine, reflects our enhanced consciousness of its importance and of its potentialities both in the medical profession and among the general public, including their elected representatives in the governments of the world.

Social medicine, not to be confused with socialist medicine, is indeed our main contact with the laity, since it covers a part of medicine which they can readily understand, and the execution of it, particularly from the financial angle, lies in their hands. In this field of medicine, too, the fundamental principles are the same in all parts of the world, whether the conditions be civilized or primitive.

Challenge to the Student

What is the challenge to the student? There are certain qualities essential to all students, from whatever part of the world they may derive. It is not difficult to draw a brief pen-picture of the ideal medical student; cultured, broadly educated in the humanities, intelligent and intellectual, of transparent integrity, humane and sympathetic, and, above all, one who will love his profession as well as his fellow men and all their weaknesses, their joys, and their sorrows.

It would be impossible for all students to attain such an ideal, but all should have at least some of these qualities, either inherent or capable of development, for I personally believe that unless this is so the man will never make a doctor, however well he is taught. Selection therefore becomes of importance, and will be a part of our discussion.

It is reasonable to suggest that the profession of medicine, being recruited from the upper one-third stratum of the normal distribution of intelligence, should be composed of something better than a high average. This view must necessarily be related to the demands of other professions and occupations, which likewise need to be recruited from the same stratum. Indeed, it may be necessary to survey the manpower available in relation to the number of doctors required by the various peoples, some countries being prosperous and urbanized, others prosperous and rural, many poor and underdeveloped.

In all countries it is important that the medical profession, while being technically competent, should also have such intellectual and social prestige and such unquestionable integrity as to command respect in the councils of the nation, the province, and the community. Medical students must be recruited on individual qualities and ability, quite independent of family, of personal fortune, of class or family distinction, save that a cultured philanthropic family tends to foster desirable qualities.

There can indeed be little doubt that the first challenge to medical education at this time is the challenge to education itself. Has the government of a particular country so ordered its educational system that a proportion of its youth will be fit to take up the most exacting profession in the world? If this is not the case, then the omission may need to be rectified at adult phase, perhaps in another country, otherwise there is little point in making fine or even coarse adjustments in the medical curriculum if the soil is not fit to receive the seed.

The Medical Teacher

Just as we think of the ideal medical student (though we ought really to think of the average, for this is the type with which our educational methods have to contend), so also we can picture the ideal medical teacher, whether he be teaching at the bedside, in the outpatient department, in the operating theater, in the laboratory, in the lecture-room or in the field.

Not all can attain the ideal, and it is not necessarily true, in fact often not so, that an expert in his subject can readily hand on his knowledge to others. Yet the expert and the artist can usually impart something which the professional teacher cannot convey. There is, however, much to be said for the wide use of some form of tutorial system in the teaching of medicine. By this I do not mean what is generally implied by a medical tutorial—namely, question

and answer in preparation for an examination. I think, instead, of the relatively young, experienced, keen member of a hospital staff to whom a small group of students can be permanently attached during the whole time of their hospital learning. The group could gather with the tutor, once or twice a week, from their several and different duties and discuss with him the doings and experiences of the week. Such a tutor, who might well be a general practitioner, could direct studies, review the work of the week, integrate and coordinate the various experiences and give point and emphasis in such a review to all the aspects of medicine, social, hygienic, psychological, ecological, historical and so on, which various advocates would especially wish to have inserted into an already overloaded medical curriculum. Such a tutor would indeed help to correct the departmental attitude which tends to overemphasize a narrow subject. Good tutors are difficult to find, and they should not be overloaded with too many students, otherwise the personal atmosphere, that of a family rather than a tutorial class, would be destroyed.

Presentation is in many ways as important as what is presented. The classics, thought by many to be the ideal form of education, are worse than useless if presented to the student in a way which repels him.

The selection and appointment of future teachers might well be more deliberate than hitherto, in order that some may be chosen for their teaching capabilities; and such appointments in some grades might be for limited terms instead of for life.

What Is To Be Taught?

So much, then, for the medical student himself and his teacher. I must now take up the third challenge —namely, what is the student to be taught? From the narrow point of view one can argue endlessly whether this or that subject should be included in the curriculum and how many hours a week or a term should be devoted to it. With such an approach this conference would probably make little progress even if it were to confine its attention to the problems of the various medical schools and faculties in Britain.

Obviously the content of the curriculum is important, and during this week we shall learn a lot from each other with regard to it. Medical education, however, in any one area must to some extent be related to the medical needs of the population of that area. For example, the doctor practicing in Britain will not need to be an expert in tropical medicine. Yet Britain's worldwide responsibilities in the Commonwealth have been reflected in the fundamental contribution made to the subject of tropical medicine by British workers. I need mention no more than Manson, Ross, Bruce, Leishman and Leonard Rogers. This illustrates at least the fact that medical education can never be parochial.

The approach I have made with my program committee has been to determine four principal sections and to select topics within these which will bring out and illuminate principles and methods. Let us just look for a moment at a few of the many things in which a medical student might be profitably instructed or of which he at least ought to have some knowledge. The complexity and variety of the subject arise from the enormous accumulation of knowledge during the last 50 years, and especially during the last 25 years.

Nuclear physics, colloid science, and enzyme chemistry have provided us with new instruments of thought

and practice. The bacteriologist has come to govern the surgeon in the operating theater, the nurse in the ward, the cook in the kitchen, the practicing doctor who uses antibiotics, and the public health worker who is concerned with community infections. The problems of blood transfusion, at one time seemingly simple, are now an affair of genetics, specialized serology and statistical analysis. Even clinical experience and a flair for diagnosis can no longer be regarded as infallible guides to ultimate clinical truth; the opinion needs to be checked by means of which the clinician may be profoundly ignorant. The clinician may indeed be momentarily embarrassed when asked for a quantitative expression of his observations and deductions. Medicine is coming to draw even more heavily on the more exact basic sciences and to become more precise and scientific in the formulation and execution of its tasks. It has been said that "science is measurement," and the medical statistician is now an indispensable member of the team which assesses the results of new remedies in a clinical trial or the efficacy of a new immunizing agent.

The challenge to our universities and medical schools is a simple one. Are we preparing our students at least to grasp the principles behind all this scientific work? Does the student leave the university with an understanding of the methods of science and with some knowledge of its history? The doctor of the future will have to be grounded more firmly in the basic sciences than was the student of 20 or 30 years ago, otherwise he will not be prepared to meet the challenge of advancing knowledge which is making medicine a more complete science. And here at once we come up against a difficulty. Because of the length and the ever-increasing complexity of medical studies university authorities ask that the boy at school shall have passed his first medical examination in the basic sciences of chemistry, physics, and biology before he enters the medical faculty. Parents, too, approve of this requirement because of the cost of medical education. The schoolmaster has had to bow the knee to this necessity. But there is evidence that there is now some poverty of mind in the finished medical and science graduates because of lack of general education in the humanities, literature, language, history, philosophy and the arts. There is little doubt that the medical student who is to be a practicing doctor should understand the world in which his patients live, and should be able to approach them as human beings with a depth of understanding that can come only from an appreciation of civilized values. We are indeed aware of the obvious dangers of too early specialization in science among those who are going to graduate in science and medicine. Perhaps the discussion between schoolmasters and doctors at the conference will help to find an answer to this problem. Here, however, I would say that it is not advisable to extend the graduate period of education if it can be avoided.

It is also desirable, wherever possible, to preserve the continuity of education in school, university and, indeed, in postgraduate studies. For example, the inorganic and organic chemistry at school should lead to extension of these subjects in the first medical examination and so to the biochemistry and physiological chemistry of the second medical examination, and thence to the application of these to the clinical work of the bedside in the form of chemical pathology. I shall listen with

interest to hear whether speakers will state at which point in a student's education at school and university a medical orientation should be given, for example, to the teaching of chemistry.

From the undergraduate standpoint the depth to which the subject should be taught also presents a problem. How much chemistry? How much physics? How much anatomy? Does the intending and practicing doctor need to memorize in detail, and then forget, the three-dimensional relations of the posterior triangle of the neck? Does he need to learn the dosage in Rontgen units of the radiation treatment of carcinoma of the cervix? Does he learn anything, as a student, when spending hours in an operating theater watching the surgeon remove a tumor of the brain? Could he not spend his time more profitably in the outpatient department, the casualty reception, the polyclinic or even in an art gallery or on the football field?

Sometimes a subject may become a burden in a particular medical school because of a struggle to maintain a department in a prominent position. I myself believe that a student should receive continuous and lengthy instruction only in the common and basic and useful and everyday clinical problems, but he should content himself with a single experience in rare or specialized procedures. The brain operation which I have quoted will serve as an example, and likewise with the highly specialist work of the ophthalmic and other departments. On the other hand, more experience in such special departments as dermatology would be repaid in the field of actual practice.

Only by discussing such views and exchanging ideas shall we eventually find out how to unload the medical curriculum to make room for new subjects and how to give more attention to parts of training that have been neglected or should receive a fresh emphasis.

I should like once again to emphasize the need for continuity of teaching and how important it is to avoid presenting the student with separate blocks of instruction, the one block being unrelated to the other except in terms of successive examinations which have to be passed. The student must never think of the various phases of his education as a vista of obstacles between him and his final qualification, to be overcome as soon as possible and, once overcome, to be forgotten.

Integration of Medicine

Some of the themes for discussion this week remind me of one of my most distinguished predecessors at Cambridge, Sir Clifford Allbutt, who protested eloquently and with learning against the separation of medicine and surgery, a separation for which physicians are much to blame. Likewise many now hold the view that physiology and anatomy should be integrated as a single basic subject in the curriculum. We do not now need to train the 19th-century prosector. He can train himself after he has qualified.

Integration is indeed a fundamental requirement in the curriculum. Teaching has grown up piecemeal. Some aspects are mere survivals which have long lost their relative importance; others, of modern conception, have not been fully appreciated or orientated. Someone might well attempt to write a reasonably short textbook giving the principles governing the integration of all the many facets of medicine. If all the bees could be collected in one bonnet we should indeed have

made progress. Happily the clinician in the wards is now accustomed to welcome to the bedside the physiologist, the pathologist, the radiologist and, especially, the general practitioner.

I feel sure myself that the properly chosen medical tutor could contribute very much to real integration and so do away with both piecemeal instruction as well as the danger of disproportionate department and sectional emphasis.

Preventive and Social Medicine

This country's experiment with a National Health Service is one manifestation of the view that medicine is also a social science. The illness of one person is not an isolated event having no effect on others. Tuberculosis is not caused only by the tubercle bacillus. Housing, nutrition, conditions of life and work, all play their part, whilst in the chain of recovery the physician, the surgeon, the pathologist, the radiologist, the sanatorium, the public health officer and the social worker in the home and in industry are all involved.

The study of man in relation to his environment, human ecology, is the fundamental basis of what is now called social medicine. The challenge to medical education to meet this growing consciousness of the importance of social medicine comes from within as well as from without the medical profession.

A complete section of this conference is concerned with the teaching of preventive and social medicine, a subject in which the World Health Organization takes a special interest. Thus, there will be opportunities for educationists from all parts of the world to exchange ideas and experiences. And it is to be hoped that what is said will help those responsible for medical education in countries where facilities are less highly developed, especially, perhaps, in the fields of social and preventive medicine.

The Objective of Medical Education

Whatever be taught to the student, it is as well at some phase to ask ourselves coldly and critically: what is the object of undergraduate medical education? The short and incomplete answer is to turn out someone fundamentally equipped to be a practicing doctor. The period of training should not be specifically directed towards the training of a general practioner or a specialist or a public health official or an administrator, but should provide the student with a foundation for his aftercareer in any branch of medicine. It is his postgraduation apprenticeship and narrower studies which finally complete his early education in the branch of medicine he elects to follow, whether this be general practice or a specialized field.

The undergraduate teacher should aim at producing an educated person grounded in principle and method, able to see what the whole of medicine stands for and means, trained to observe with his hands and his senses, encouraged to think logically and critically, instructed in the use of the instruments of measurement, and equipped with a basic knowledge upon which he will continue to build for the rest of his professional life.

Are we as medical teachers doing this? Or is teaching just a by-product of our professional life? Do we positively examine ourselves from time to time with a critical eye, or do we complacently content ourselves with no more than getting the student over an examination?

Are we also satisfied with the means by which a student's compe-

tence to be qualified is assessed? Has the examination a hampering effect on what is taught and learned and, if so, can we suggest any alternatives? Always we have to bear in mind that in many countries the manner of assessing competence and the standard are governed by law. There is, however, little doubt that experiment would show some ways in which the perpetual orthodox examinations could be advantageously modified.

Those of us who had the task of devising the program for this conference had to pack a great deal into the short space of a week. Many themes I should like to have heard discussed have had to be omitted. Many here might have made different choices. All of you will, I hope, by the end of this week conclude that we have made a useful beginning in tackling this most fundamental of all medical questions—education. And if that is the conclusion, I hope that, individually and collectively, you may decide that the organizations which you represent might be asked to repeat the conference in four or five years if it is felt that that would carry the matter further.

In the meanwhile what likelihood is there that something will be done? That those in control of medical education will really have the humility and courage to admit that all is not at its best in the best of all possible worlds, their worlds? That those who hold the shaping of the future in their hands will fashion it with vision and imagination so as to inspire the young man and woman to pursue the tasks of our great profession with a feeling of dedication to something greater than themselves? There is indeed a likelihood, otherwise so many of us would not have met here in London in the month of August. But the possibilities must be turned into probabilities and certainties, and until this happens we must possess our souls with that discontent that has so aptly been called divine.

We may aim higher than we can reach. But if we aim high we shall at least reach somewhere. Our individual and collective responsibility as a profession grows, and will grow. We cannot escape it. Medicine today demands much from character, intellect and practical ability, and medicine also provides a wide variety of opportunity for all kinds of talent. But talents will be wasted or misused if the structure and content of medical education are faulty, and if medical educationists remain complacently satisfied with themselves and their methods.

What Is Education?

SIR RICHARD LIVINGSTONE

WE HAVE—most of us—to earn a livelihood. We find ourselves on an immense stage called the universe, occupied by strange creatures called men, and we must have enough knowledge of this scene and of its inhabitants to play our parts intelligently. And we are human beings, with a body, a mind and also something elusive and indescribable but very real, which we call a soul or spirit—three elements which combine in our personality and which interact on each other; and we wish to make the best of all of them, so far as our natural endowments allow. For even if there were no Great Assize before which at the end we shall be summoned to say what we have done with ourselves and our talents, the world will judge us; and, what is more disquieting, in moments of insight and reflection we shall judge ourselves.

These three needs determine the aims of education. It should prepare us, either by a general or a vocational training, to earn our bread; it should give us some understanding of the universe and of men; and it should help us to become fully developed human beings. Of these three aims the vocational one which concerns us as breadwinners is least likely to be overlooked; and I shall therefore say nothing about it, but concentrate on the other two aims—the making of intelligent citizens of the world and of good human beings—*homines maxime homines.* These two are the most important to us as men, but, since they are the less obvious and the more difficult, they may be neglected, and especially the last of them. Yet the human being is a work of art, capable of a quality and beauty of its own, quite apart from any practical purposes to which its powers are put.

Sir Richard formerly was president of Corpus Christi College, Oxford.

Science an Essential Part of Education

We have to live in a material universe inhabited by men, and to live intelligently we must know something of both. The keys to a knowledge of the material world are commonly called (not very happily) science, and so some knowledge of it is an essential part of education. But in planning our curriculum we should distinguish between scientists, doctors, engineers and others, who require exact knowledge of science in their occupation, and those who do not. For the needs of these two classes are not the same. The former class must have special-

ist knowledge of the sciences which they require for their life's work. The need of the others is different. It is less important to teach them chemistry or physics or biology than to give them an idea of the meaning of the changes that came in human affairs about 600 B.C. when some Greeks realized that there was more in the universe than the senses could perceive, and began looking beneath the surface of phenomena to underlying realities and laws, and science was born and, again, when in a later day other men conceived that through such knowledge nature could be controlled as well as understood, and science gave birth to her child, technology.

To realize the meaning of science, her powers and procedures, the instruments of observation and experiment by which she works—that is more important than teaching individual sciences to pupils who are not going to specialize in science—it is, of course, only of them that I am speaking. By all means add to this essential core as much as time permits. But I can see no use in being taught, as I was, the elements of chemistry and physics without ever having an idea of their meaning and use, or any conception of the fascinating truth that you can transform things by analyzing them into their constituent elements. The teaching I had did not make me less of a stranger in the material universe than I was before. It only gave me a transitory knowledge of some isolated facts in which I saw no meaning.

Science, then, though in different forms, must have a place in all education, for the material universe is the stage on which the human drama is played. We say, no doubt, that man is not the center of the universe, but, however true that may be, everyone continues to act much as if he was; if we did not think our activities of great importance we should cease to take them seriously. But the drama is human and the actors are men, and the actor is more important and interesting than the stage. His fortunes are, in practice if not in theory, the fortunes of our world, and apart from them it would have lost any meaning. Man is the source of ideas and ideals, the deviser of progress and its instrument, the maker of that rich and ingenious structure which we call civilization. As Shakespeare put it, "What a piece of work is a man. How noble in reason! how infinite in faculty! . . . in action how like an angel! in apprehension how like a god! the beauty of the world! the paragon of animals!" That is man in his better moments; he has other moments too. Anyhow, in himself he is a fascinating study, and without some study of him we shall not live our lives with intelligence, interest or, in any but the narrowest sense, success. That is why Dr. Conant, himself a distinguished chemist, said that "in terms of general education, poetry and philosophy are of vastly more importance than science;"* so history and literature must enter into any education; for they are our chief records of man and his ways.

Place of History and Literature

In history we see his slow ascent from savagery to a complicated civilization, his experiments, mistakes, failures and successes in the climb, the states he has founded, static or progressive, transitory or stable, the forces that have brought

*"Education in a Divided World," p. 126.

him on or kept him back, the virtues that have sustained his efforts, the vices that have brought them to nothing. History is a clinical study of man in society. Literature is more personal. Here we meet man in his intimate moments, talking to the world, but really to himself, so that in literature are recorded all the thoughts, feelings, passions, visions and dreams that have ever passed through the human mind and some of the visions play a great part in human progress. In one way literature is less instructive than history, because history has to do with facts, and poetry with visions; in another way more so, just because it is more intimate, more personal. We meet human nature in undress, we meet ourselves, but also we are taken beyond ourselves to an exceeding high mountain and shown all the kingdom of man and the glory of it. Religion first, but close after it poetry, reveal powers and qualities in man which otherwise we should not know. Lifted on the shoulders of genius, we catch a glimpse of undivined worlds which are within the reach of the human spirit.

The Right Aim

But you may reasonably ask, is this the way in which literature and history are taught in schools, or even in universities; is this the light in which they are presented to the pupil; and do not many people study them without any clear idea what they are about? I will not answer these delicate questions, but they remind us of an important fact. It has been said that it does not matter what subject you teach a pupil, if you teach it well. I would add (though neither of these epigrams is quite true) that it is no use teaching anything if you teach it badly. And not only must a subject be taught well, it must be taught appropriately. I argued earlier that it is a mistake to teach science to an arts specialist in exactly the same way as you would teach it to someone whose main study it is. I do not think that this mistake is now often made in teaching science to those who will never specialize in it. But it is, I fancy, sometimes made in teaching literature and history to scientists. The right aim in teaching these subjects to those whose work and interests are in science is less to instruct them than to awake the mind, to make the pupil feel the interest of literature and history, even though his detailed knowledge of them may be small. I would rather that a boy had read one dialogue of Plato, one canto of Dante, one play of Shakespeare or Racine with real enjoyment, and with a keen sense of its greatness, than that he should be hurried through masses of literature which he neither understands nor enjoys nor absorbs. If he is interested, he is likely to pursue the study further in his leisure and he will at least have become aware that there are more things in heaven and earth than are dreamt of in his specialism. By all means add to this stimulus as much knowledge, as wide a survey, of history and literature as you have time for: but without the stimulus these are vain. General culture is designed, as Whitehead said, "to foster an activity of mind."

Four Points

So far I have been talking about the introduction to the kingdoms of nature and of man—a preparation to feeling at home and living intelligently on the stage where we find ourselves. But we also need some instruction about how to behave

there, and I shall mention briefly four points of good behavior. One point is to learn how to express ourselves intelligibly to others. A second point is to know how to read a book, noting exactly what it says. A third point is to think clearly and logically. John Morley said that an educated man knew when a thing was proved and that an uneducated man did not know; and this saying, though not an exhaustive account of education, calls attention to an essential element in it.

Logical thinking is one way to truth, but it is not the only road, nor is it a complete one, and so I should add to my proposed code of behavior a fourth item—the insight that comes from sensitiveness—to supplement and correct the knowledge which comes from hard thinking. This is often neglected in our education. The sensitive person with an undisciplined mind is a danger; so, less obviously, is the mere intellectual. He is not likely to be good at what has been described as the sacred duty of getting under other people's skins— especially the skins of people unlike himself. Some human beings are born with the sensitiveness that makes this easy and habitual. But it is a gift that can be trained, and the best training in it is given by two subjects that find a place in any curriculum—history and literature, especially literature, where the reader enters into the mood of the writer, the atmosphere of the poem, the temperament of the character described. Take for instance Shakespeare's "Othello." Except for the pleasure which the rich language gives, one might just as well not read it if one does not for the moment creep under the skin of the Moor, of Desdemona—yes, and of Iago—and feel as they feel in the play. Of course literature has the power of absorbing us in bad, as well as good, moods and atmospheres; that is the reason why Plato thought it dangerous. But a training in sensibility and the insights which sensibility gives is essential. For knowledge is not merely the collection of facts; it depends on imagination as well as on reason.

An Overruling Principle

So far I have suggested that the aim of education is at least to introduce us to the worlds of nature and of man, and to train the powers of reason and imagination and the art of expression needed for effective behavior in them. But that is not enough. It would be possible to have all these and yet be without that overruling principle which we call a philosophy of life; a force to steady the purpose and give it direction, to concentrate the abilities and bring them to bear, to recall and revive the flagging energies; a force which is

> Victory and law
> When empty terrors overawe;
> From vain temptations doth set free
> And calm the weary strife of frail humanity.

An education is incomplete unless it leaves people with what I have called a philosophy of life, and never was this more needed than in our age of uncertainty. But the very conditions which make it desirable make it difficult. Order is not easily visible in chaos, nor a clear voice audible in a confusion of tongues. The Christian no doubt has firm beliefs and clear standards, and my own conviction is that Christianity will become again the philosophy of the western world; but that day is not yet. Meanwhile can we find an interim philosophy which can be imparted through education and which is sufficiently powerful to dominate men's minds

and hearts, sufficiently convincing to win a general assent? It is not easy to see one. What philosophy of life—to take an obvious instance—can the western and the Russian blocs share? There is only one creed which men in every continent agree to repeat: "I believe in Science and in its child Technology." That is a starting-point; it is something. But it only covers a limited area of conduct, and it does not profess to answer the most important questions about life and human nature. You cannot call it a philosophy. A principle of wider range is needed.

Philosophy of the First-Rate

There is a philosophy which gives standards of value and judgment that apply to all spheres and activities of human life. It is a very simple one, and no one would reject it. I would call it the philosophy of the first-rate. Ask a doctor or a surgeon if he is ignorant of or indifferent to the best methods in his profession. Would he answer yes? Or would he consider that there are no differences of quality in art, literature, music, architecture, and that it does not matter whether a picture or a sonata or a play or a building is first-rate or third-rate? Or, taking the inquiry into a still more important province, do we think that when we apply the words good or bad to human character and conduct we are drawing meaningless and unimportant distinctions? In all fields of life all people, whatever their creed or race, admit what I called the philosophy of the first-rate. I have already quoted John Morley's saying that an educated man knew when a thing was proved and that an uneducated man did not know. I would prefer to say that an educated man knows, and an uneducated man does not know, what is first-rate, and that the best-educated man is he who knows the first-rate in the most important human activities.

The supremacy of the first-rate is a self-evident axiom. But it is sometimes an unrealized axiom. We are like the slave in the *Meno*, who had the principles of geometry latent in his mind, but never recognized them till Socrates played the midwife and brought his subconscious knowledge to the birth. For our purpose education must be the midwife—the metaphor suggests one of the most fruitful and fundamental conceptions in that field—and bring to birth this philosophy of the first-rate, which is so fruitful and which no human being would disown.

But how do you know the first-rate? How do you recognize it in practice? There is only one way of getting to know it—by seeing it; and that is the way in which it can be taught. I imagine that the medical student will learn more by seeing a great surgeon at work or by going round the wards with a great doctor than all the textbooks in the world can teach him. It is the same in anything. People learn what is first-rate by contact with it. You learn what is great music by hearing it, what is great architecture by seeing it. You learn first-rate business methods by working in a first-rate business firm. It is the same everyhere. You acquire a good taste in wine by drinking it, in good cigars by smoking them.

In cigars and wine, if we have the money, in art and music, even if we have not, it is easy to come across the first-rate. But where do we find it in character and life? It is at hand; in the great religions, and the great moral systems, but also in literature and history, though here the pure gold runs in veins amid much worth-

less matter. Make, for instance, a list of the good men and women in Shakespeare's plays, and what a company of noble characters you will assemble. Here, and throughout the literatures and the history of every country, archetypes of excellence are present for the looking. These are the great sources on which we can draw, and here is one reason why an education which ignores the humanities is disastrously incomplete. I do not of course suggest that the study of history and literature is only the study of human ideals, conduct and character. Obviously, these subjects have many other aspects. But it is with this aspect of them that we are concerned at the moment. Therefore, for our particular purpose, history and literature must be read from this angle and with this aim in view. Unfortunately, this is often ignored in the teaching of history and even of literature. Their teachers have usually been trained as experts by experts, and are interested in those other aspects of the subject with which universities concern themselves, but which, necessary and important as they are, are of no use for our particular purpose. For that, history and literature must be treated as mirrors of human character, and indeed as moral philosophy in the concrete.

But, you may ask, how do you know what is first-rate in literature and art, and still more in human character? As Browning puts it,

> Ten men love what I hate,
> Shun what I follow, slight what I receive,
> Ten, who in ears and eyes
> Match me: we all surmise
> They this thing, and I that: whom
> shall my soul believe?

That is a plausible question, but more embarrassing in dialectic than in fact. There is no real doubt that Homer and Shakespeare are great poets, Bach and Beethoven great musicians, Plato and Kant great thinkers, Newton and Faraday great men of science. Even in the more uncertain field of character and conduct no one is likely to doubt that in St. Francis or the Buddha, in Lincoln and Masaryk, we see the first-rate. We are safe in accepting the judgment of time; it is rarely reversed on appeal.

To repeat, an education which leaves us without a philosophy of life is as incomplete as one which leaves us unable to think or to express our thoughts. And never was a philosophy as necessary as in an age of divided purposes and paralyzing doubts about ultimate ends. Our civilization is fluid, its future form still to seek and make. At present it is a curate's egg civilization—some of it excellent, some of it fourth-rate. If you question this criticism, look at our cheap daily papers. Yet ours is an age of great vitality, of unlimited powers and possibilities, too often frittered away or misused. We have the materials of a great civilization: all that is needed is to stamp it with the print of excellence. The more reason that our education should train our youth to desire, recognize and pursue the first-rate.

Editorials and Comments

Physicians and Personnel Shortages

FOR AT LEAST 10 years medical and hospital administrators have been faced with the problem of shortages of health personnel. Increased awareness and utilization of health facilities and services by the public, military needs, competition from industry and other factors have served to keep the problem acute.

The Health Resources Committee of the Office of Defense Mobilization has studied the problems created by these shortages over the past several years. One result was a reduction in allocation of medical, dental and nursing personnel for the armed forces, thus increasing the numbers of these persons available to the civilian population.

The shortage of skilled manpower in civilian hospitals, however, is still acute. Many persons feel that unless steps are taken to make better use of professional nursing skills and to recruit, train and utilize effectively paramedical personnel and other types of hospital workers, a national emergency will result.

To further assist civilian hospitals, the Health Resources Advisory Committee created a special Subcommittee on Hospital Services, and in late summer this group issued a statement on "Meeting Your Hospital Personnel Shortage." Signed by Dr. Edward J. McCormick, president of the American Medical Association, and by Dr. Edwin L. Crosby, then president of the American Hospital Association, the statement was distributed to the administrator, chief of the medical staff and director of nursing at each hospital registered by the AMA.

Although aimed primarily at hospital executives and trustees, the statement suggested some specific ways physicians can help overcome the problems created by nurse and other personnel shortages in hospitals. These include:

—Cooperation in development of the "team approach" to hospital management through joint conference committees of members of the governing board, medical staff and the administrator.

—Leadership in planning effective use of paramedical personnel.

—Education of physicians by the chief of each hospital medical department to "accept administrative procedures and routines and to cooperate in the development of operating policies which are of advantage to his physicians, the hospital and the patient."

—Recognition of the importance of training in leadership skills for all supervisory and most staff nurses.

—Cooperation with hospital management in such routine procedures as: completing medical records; reviewing daily orders and standing

orders; scheduling rounds, treatments and surgical procedures; requesting private nurses only when essential.

—Participation in programs of inservice training for professional nurses, paramedical personnel and other hospital workers.

Many persons who have studied the problem of personnel shortages feel that the situation will not change for a long time, and that a final solution can be reached only after physicians, nurses, hospital trustees and administrators accept the fact that shortages will continue to exist. The development of such understanding among physicians should logically begin with the undergraduate medical students, so that they will have a more realistic approach of the hospital staffing picture from the start of their medical training.

A New Markle Grant

A GRANT OF $195,000 payable over a period of three years was made recently to the Association by the John and Mary R. Markle Foundation. The Committee on Student Personnel Practices is to receive $50,000 a year for three years to support its basic program in the face of falling testing revenues. The Journal of MEDICAL EDUCATION is to receive $20,000 for the year 1953-54, $15,000 for the next year, and a final grant of $10,000 during the year 1955-56, to help it establish itself on a self-supporting basis.

When John Russell, vice president and executive director of the Markle Foundation, spoke to the Association some five years ago, he recommended that the deans of the medical schools assume leadership in medical education. The Association of American Medical Colleges could be the agency, he pointed out, to bring about the needed cooperation and facilitate work on the vital areas in medical education today.

He has backed up his words with strong financial help, and the Association has, in part because of this help, been able to be increasingly effective. The financial help which the Markle Foundation has given in the past several years, including this recent grant, totals almost half a million dollars. These funds are divided as follows: to the Medical Audio-Visual Institute, $22,500; to emergency support of the Association, $51,000; to the development of the Journal as an effective means of disseminating information about significant work and thought in medical education, $84,000; to the study of preprofessional education, $95,000; and to the work of the Committee on Student Personnel Practices, $195,000. Of the total amount of $447,500, $322,500 has been paid—$65,000 is for work in 1954-55, and $60,000 for 1955-56.

The very size of the support, and the fact that it has been given to meet the general needs of the Association in this period of its rapid growth, place upon the officers and members a heavy responsibility. It is hoped that Mr. Russell and his board of directors will, when sufficient time has elapsed to permit a judgment, find that they have invested their money where it has been effective in improving medical education.

A "First" for the Journal

THE SIXTY-FOURTH Annual Meeting of the Association of American Medical Colleges convened late last month. For those who gathered in Atlantic City October 26-28, the days were busy ones—there were discussions to be held, decisions to be reached, shop talk with colleagues from all sections of the nation.

To help bring some of the flavor and some of the accomplishments of the Annual Meeting as quickly as possible to those who were not present in Atlantic City, the Journal is publishing a comprehenive news-type of report of the Meeting in this issue. This report, made up of pictures and text, may be found on pages 43 through 54.

The *Minutes of the Proceedings* of the Annual Meeting, published each year by the office of the secretary will, as is usual, carry the formal reports of the various Association committees, the Executive Council and the headquarters staff; actions taken by the members, and other business considered. The *Minutes* of the 1953 Annual Meeting will be published next month as part of the December issue of the Journal.

Our Readers Write

Match On!

To the Editor:

Your press release on the October issue (of the Journal of MEDICAL EDUCATION) carries a story on the latest matching plan ("A Matching Plan for Admissions to Medical Schools," John A. D. Cooper and Harold A. Davenport). It is just dandy. People who like to run everything from Washington, D.C., will love it.

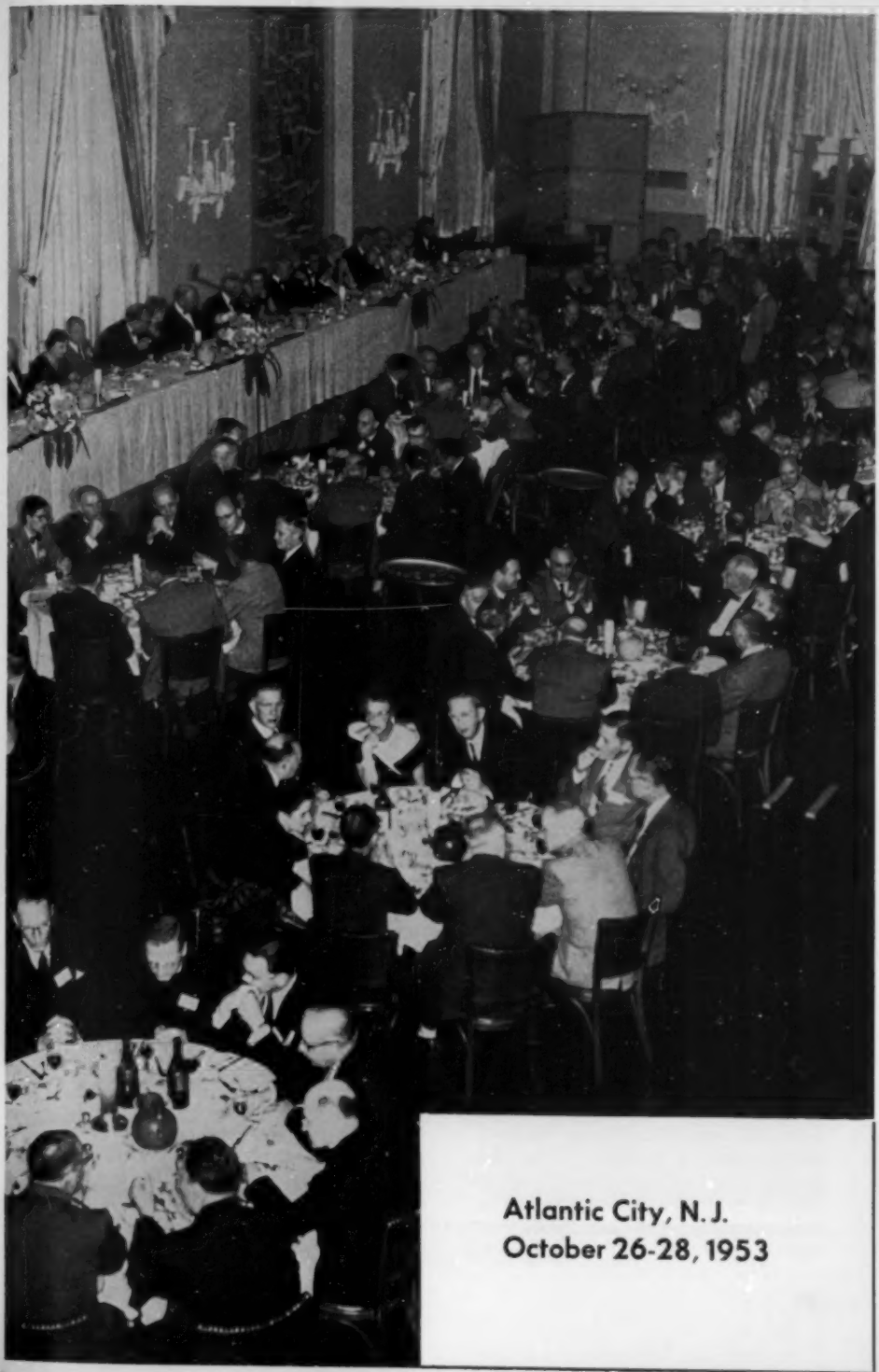
It set me thinking about the next move of the matchers. I suppose they will match newly produced doctors to their communities. Probably the idea will be used to match the doctor to his office. Undoubtedly it would help to match the office nurse.

Just think of all the heartaches and troubles mankind will be spared when we learn from these gentlemen how to match husband and wife.

We could even match political candidates with jobs and spare ourselves the quadrennial agony.

Finally we might suggest matching candidates for Heaven and Hell, but I suppose St. Peter would get a little bored by the unbalanced preference listings.

HERBERT L. HARTLEY, M.D.,
Editor-in-Chief,
Northwest Medicine



Atlantic City, N. J.
October 26-28, 1953

AN OVERFLOW audience was present at the first formal Annual Meeting session on Monday, October 26.

Report of the Sixty-Fourth Annual Meeting

MORE THAN 400 persons interested in medical education attended the 64th Annual Meeting of the Association of American Medical Colleges, October 26-28 in Atlantic City, N. J. During the three-day meeting, registrants participated in general and panel discussions, heard several addresses, reviewed achievements of the past year and talked over future plans.

A major change in the Association's Constitution and By-Laws, passed unanimously, provides for individual membership for the first time since the AAMC was organized in 1876. The constitutional revisions, recommended to the membership by the Executive Council, were approved at the opening business session on Monday, October 26.

Under the revised structure, four classifications of membership application are available and, upon action by the Council and the membership, may be granted. These are: (1) *institutional membership* for any medical school or college in the United States conforming to the requirements of the Association; (2) *affiliate institutional membership* for any medical school or college in Canada or in present or former possessions of the United States conforming to the requirements of the Association; (3) *individual membership* for any person who has demonstrated a serious interest in medical education over a period of years; (4) *sustaining membership* for any person, organization or agency which has demonstrated a serious interest in medical education over a period of years.

Individual memberships, set at $10 per year, will entitle holders to a copy of the official minutes of the proceedings of the Annual Meeting and special meetings, to a copy of the Association *Directory*, and to a one-year subscription to the Journal of MEDICAL EDUCATION. Individual mem-

TALKING over affairs of the Liaison Committee were (left) Dr. Hinsey and (right) Dr. Dorst of the AAMC, and Dr. Herman Weiskotten of the AMA Council on Medical Education and Hospitals.

LEADER of the Tuesday morning panel discussion of the Survey of Premedical Education was Dr. Aura Severinghaus (left). The afternoon panel discussion on the Survey of Medical Education, was led by Dr. John Deitrick.

ATTENDING the Friday meeting of the 1952-53 Executive Council were (starting left and proceeding clockwise) Dr. Berry, Dr. Dorst, Mr. Stalnaker, Dr. Bowers. President Darley, Council Chairman Hinsey, Dr. Smiley, Dr. Youmans, Dr. Lippard and Dr. Turner.

EIGHTEEN NEW DEANS were introduced at the opening session. Thirteen of them, shown above, are (sitting, left) Dr. Francis M. Forster, Georgetown; Dr. Norman Nelson, Iowa; Dr. Roscoe L. Pullen, Missouri; Dr. Mavis Kelsey, Texas Postgraduate; Dr. Ralph B. Snyder, New York Medical; Dr. Gordon E. Goodhart, Southern California; Dr. Theodore H. Harwood, North Dakota; (standing, left) Dr. Roger A. Harvey, Illinois (acting dean); Dr. Thomas H. Hunter, Virginia; Dr. Phillip Bard, Johns Hopkins; Dr. Harold C. Wiggers, Albany; Dr. Francis R. Manlove, director of medical center, Colorado; Dr. Donald G. Anderson, Rochester.

AMONG speakers at the opening session were (left, above) President Ward Darley and (right, above) Dr. Julius Comroe, Teaching Institute chairman. The Committee on International Relations (at left) met Sunday. Standing near the blackboard is Dr. Francis Scott Smyth, chairman.

HIGHLIGHTS of the Teaching Institute were presented at the opening session of the Annual Meeting by members of the Institute Steering Committee. On the platform in the picture at left were: (left) Dr. Victor Hall, Dr. Julius Comroe, Dr. George Packer Berry, Dr. Abraham White, Dr. Eugene Landis and Dr. George Acheson.

On Monday afternoon eight round table groups met to discuss reports from the Institute. Leading the group shown at right were (left) Dr. Lester Evans, Dr. James Pinkston, Dr. Comroe, Dr. Philip Handler and Dr. William Hamilton.

ANOTHER of the round table discussion groups was led by Dr. Louis Nahum (left), Dr. James Faulkner, Dr. Harold Wiggers and Dr. George Acheson.

OPEN meetings were held Sunday morning and afternoon by the Committee on Continuation Education. Chairman of the committee is Dr. George N. Aagaard, second from left in the front row.

ANOTHER of the Sunday open meetings of committees was that held by the Subcommittee on Medical Education in Time of National Defense. Third from left is Chairman Stanley Olson.

ONE OF the early registrants Sunday morning was Dr. Count D. Gibson, Medical College of Virginia, who is receiving Annual Meeting material at the registration desk.

bers will have the privilege of the floor in all discussions conducted during the Annual Meeting, but will not be entitled to vote.

Other Changes: a number of other changes in the Constitution provide for:

—Annual appointment of a secretary and a director of studies rather than election to these positions.

—Designation of the time and place of the Annual Meeting by the Executive Council rather than by the membership at large upon the recommendation of the Council.

Presidential Address

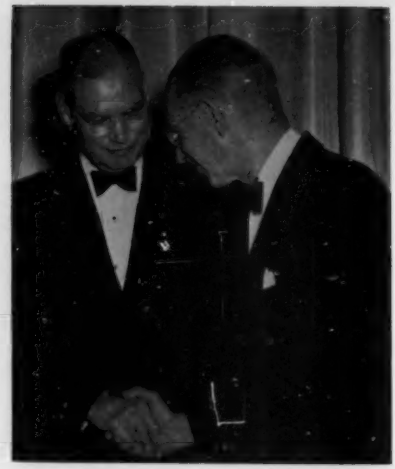
The first formal address of the Annual Meeting was Dr. Ward Dar-

MEMBERS of the Nominating Committee met Monday noon to consider the slate of officers for 1953-54. Present were (from the left clockwise) Dr. Rolf Syvertsen; Dr. George Packer Berry; Dr. Francis Scott Smyth, Dr. Gordon Scott, Dr. Currier McEwen, committee chairman, and Dr. Mark Everett.

ley's Presidential Address. Dr. Darley, formerly dean of the school of medicine and vice president of the University of Colorado, has been president of the university since July. He discussed the trends currently operating in medical education which are aimed toward improvement of both teaching and practice.

He also reviewed developments in the Association program over the past eight years, citing five important elements in this program. These elements, according to Dr. Darley, are (1) the increase in special studies conducted under direction of the Committee on Student Personnel Practices; (2) the development and improvement of the Journal of MEDICAL EDUCATION; (3) the development and accomplishments of standing committees; (4) the development of teaching institutes such as the October 19-23 Institute on Physiology, Pharmacology and Biochemistry; (5) the gradual transition of the Annual Meeting from a gather-

THE NEW Executive Council held its first meeting Tuesday afternoon. Present were (seated, left) Dr. Youmans, President Dorst, Council Chairman Hinsey, President-Elect Lippard, Dr. Darley; (standing, left) Dr. Kimball, Dr. Moore, Mr. Stalnaker, Dr. Aagaard, Dr. Bowers, Dr. Berryhill and Dr. Smiley.



IN THE picture at left, W. A. Wentworth (standing, left), secretary of the Borden Company Foundation, is presenting the 1953 Borden Award to Dr. Jean Oliver. The Award was made during the Annual Dinner, Monday, October 26. One section of the speakers' table at the dinner may be seen below. Left to right are Dr. Ashley Weech, chairman of the Borden Award Committee; Mrs. Oliver; Mr. Wentworth, Dr. Robert Moore; Mrs. Wentworth, and Dr. George Packer Berry.

MEMBERS of the Committee on Audiovisual Education got together for Sunday dinner. Present (clockwise) were: Dr. Thomas Almy; Dr. William Frye; Dr. David Ruhe, director, Dr. J. Edwin Foster, assistant director of the Medical Audio-Visual Institute; Dr. W. Clarke Wescoe; Dr. Clarence de la Chapelle, and Dr. Walter Bloedorn, committee chairman.

ing of medical school administrators to one that is attracting more and more faculty members.

Borden Award

The 1953 Borden Award in the Medical Sciences, presented annually by the Association and the Borden Company Foundation, was presented to Dr. Jean Oliver, distinguished service professor at State University of New York College of Medicine, Brooklyn. Dr. Oliver received the award, consisting of a gold medal and $1,000, during the Annual Banquet held on Monday, October 26.

Dr. Oliver's research, upon which his Borden Award was based, has centered on the kidney. In 1929 he developed a technique of microscopic dissection which led to publication in 1939 of his book, "Architecture of the Kidney in Chronic Bright's Disease." In this volume he described for the first time the structural alterations of disease that occur in the minute functional units of the kidney known as the nephrons. This work has provided medicine with the anatomical data on which the understanding of the function of the kidney is based. He is presently continuing his investigation of the origin of acute failure of the kidney associated with traumatic and toxic injury full-time, at the request of the U. S. Army.

The Award was presented to Dr. Oliver by Dr. Ashley Weech, chairman of the Borden Award Committee, and W. A. Wentworth, secretary of the Borden Company Foundation.

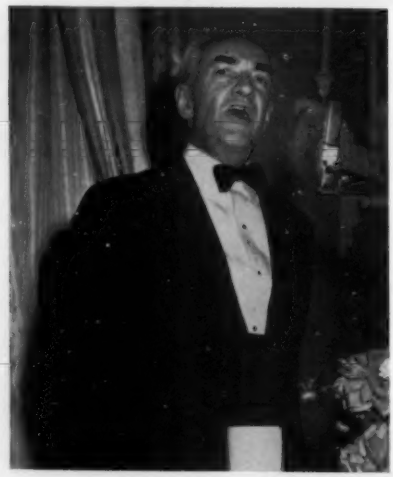
Survey Reports

Reports of two survey groups were made to meeting participants on Tuesday. The first of these, on the chief findings and recommendations of the Survey of Premedical Education, was discussed Tuesday morning. Dr. Aura Severinghaus, associate dean of the College of Physicians and Surgeons, Columbia University, led the discussion and members of the survey subcommittee participated. The report, of the survey of premedical education, includes a study of 114 liberal arts colleges in this country. It was undertaken in an effort to obtain a broad understanding of undergraduate education and its influence on the student who plans to embark on a professional career. Dr. Severinghaus has served as chairman of the study, which will be published later this month.

The second survey, discussed on

TALKING over Association affairs at the end of the meeting were (left) Dr. Vernon Lippard, president-elect; Dr. Stanley Dorst, president, and Dr. Ward Darley, immediate past president.

AT THE Tuesday morning session Dr. Alfred Washburn (picture at top), professor of human growth and development and director of the Child Research Council of the University of Colorado School of Medicine, discussed "Medicine as Human Biology." Another guest speaker during the 64th Annual Meeting was Dr. Arthur S. Adams (picture below), who addressed the group attending the Annual Dinner on Monday evening. Dr. Adams is president of the American Council on Education.



Tuesday afternoon, was on the chief findings and recommendations of the Survey of Medical Education, published last summer. Dr. John Deitrick, professor of medicine at Jefferson Medical College, who was chairman of the study group, led discussion at the meeting. He was assisted by members of the survey committee. The report covered among other subjects the effect of present-day social and economic trends on the training of doctors.

Committee Reports

A number of the Association's committees conducted advance open meetings on Sunday, October 25, the day preceding the official opening of the Annual Meeting. Regular open hearings of committees were held simultaneously Tuesday afternoon.

At the closing meeting, Wednesday morning, October 28, committee reports were presented to the full group for action. Also included in this session were reports from Dr. Joseph C. Hinsey, chairman of the Executive Council, Dr. John B. Youmans, Association treasurer; Dr. Dean F. Smiley, secretary and editor; John M. Stalnaker, director of studies, and Dr. David S. Ruhe, director of the Medical Audio-Visual Institute.

(Reports presented at the Annual Meeting and actions taken will be included in the Minutes of the Proceedings of the 64th Annual Meeting, to be published in the December issue of the Journal of MEDICAL EDUCATION.)

Officers

The final action of the 64th Annual Meeting was installation of a slate of new officers for 1953-54. Dr. Stanley Dorst, dean of the University of Cincinnati College of Medicine, took office as president. Named to office were: president-elect, Dr. Vernon Lippard, dean of Yale University

A SPECIAL meeting of the board of directors, National Society for Medical Research, was held at noon on October 27. Attending (starting right front and proceeding clockwise) were: Dr. Charles Doan; Dr. Edward Turner; Dr. Dayton Edwards; Dr. Lon Morrey; Howard Cohn and Bill Davidson of *Collier's* magazine; Ralph Rohweder, NSMR executive secretary; Dr. A. J. Carlson, president; Dr. James Faulkner; Anton Rost; Dr. William Thorp; Dr. Victor Johnson, and Dr. William McElroy.

School of Medicine; vice president, Dr. William Middleton, dean of the University of Wisconsin Medical School; treasurer (re-elected) Dr. John B. Youmans, dean of Vanderbilt University School of Medicine. Dr. Dean F. Smiley, incumbent secretary, and John M. Stalnaker, incumbent director of studies, were appointed to new terms.

Members of the Executive Council and length of service for which they were named are as follows: *three-year terms*: Dr. George N. Aagaard, dean of Southwestern Medical School, and Dr. Walter R. Berryhill, dean of the University of North Carolina School of Medicine; *two-year terms*: Dr. John Z. Bowers, dean of the University of Utah College of Medicine, and Dr. Stockton Kimball, dean of the University of Buffalo School of Medicine; *one-year terms*: Dr. Joseph C. Hinsey, director of New York Hospital-Cornell Medical Center, and Dr. Robert A. Moore, dean of Washington University School of Medicine, St. Louis. Members of the Council re-elected Dr. Hinsey as chairman.

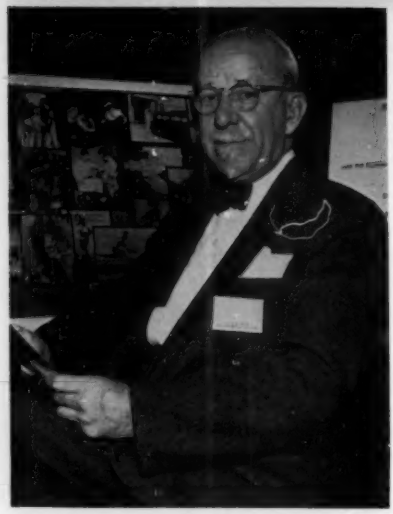
1954 Meeting

The time and place of the 65th Annual Meeting, as approved by the Executive Council, will be October 17-20, 1954, French Lick Springs Hotel, French Lick, Ind. It will be preceded by the Association's Teaching Institute on Pathology, Microbiology, Immunology and Genetics, to be held October 10-15, and by a meeting of medical school cancer coordinators which is scheduled for October 15-16.

Teaching Institute

Between October 19-23, immediately preceding the Annual Meeting, the first Association-sponsored Teaching Institute was conducted in Atlantic City. Ninety-six delegates directly concerned with the teaching of physiology, pharmacology and biochemistry in the various schools of medicine, together with representatives of school administration, the clinical sciences and allied organizations, participated in the Institute.

Highlights of the Institute on the



ABOUT 250 persons attended the Annual Dinner of the Association. Shown in the picture above is part of the audience and the full speaker's table. In the picture at the left is Dr. P. J. Flagg, president for the Society for the Prevention of Asphyxial Death, who became the first person to apply for individual membership. Second was Dr. Lester Evans of the Commonwealth Fund.

Teaching of Physiology, Pharmacology and Biochemistry were reported at the opening session of the Association meeting by Dr. Julius Comroe, professor of physiology and pharmacology at the University of Pennsylvania Graduate School of Medicine, who served as institute chairman. Eight round table groups, which met simultaneously, were held on Monday afternoon so that persons attending the AAMC meeting could discuss findings of the institute with institute participants.

Members of the Steering Committee for the Institute, which was the first in a seven-year program, included Dr. Comroe, Dr. George Packer Berry, co-chairman; Dr. George H. Acheson; Dr. Victor E. Hall; Dr. Eugene M. Landis, and Dr. Abraham White.

NSMR

A special meeting of the board of directors of the National Society for Medical Research was held Tuesday, October 27, concurrent with the AAMC Annual Meeting. During a luncheon session, the NSMR presented a special award to Bill Davidson of *Collier's* Magazine for his contributions to public understanding of the methods and needs of medical research.

Mr. Davidson, who is a contributing editor of *Collier's*, is the author of a number of significant articles on medical research. One of these, "The Antivivisectionists—Are They Finished," brought the largest flood of mail ever received by *Collier's*. Another article, "So He Took the Cobra Venom and Shot It Into His Arm . . .," launched the Walter Reed Society.

NEWS DIGEST

Manpower Council

Seventy-five leaders in professional fields, government and the armed services met October 7-12 for a conference on how to improve utilization of the country's scientific and professional manpower. The group sought practical methods to implement recent recommendations of the National Manpower Council.

Chairman of the medical personnel group was Dr. Frank B. Berry, professor of clinical surgery at the College of Physicians and Surgeons, Columbia.

The proceedings of the conference will be published in January. Work of the council is supported by a grant from the Ford Foundation to Columbia University. Its first major report, "Student Deferment and National Manpower Policy," was published in April 1952, and the council is now engaged in a study of "A Policy for Technical and Skilled Manpower."

Korean School

The new Seoul National University School of Public Health, the first school of public health in South Korea, opened this fall. The school will train Korean doctors and other health specialists in the disciplines of public health and preventive medicine so that they can become leaders in establishing civil public health programs for the health rehabilitation of the Korean people.

A library for the school, including more than 300 public health and preventive medicine texts and reference books, was presented to the school by the Harvard School of Public Health.

Acting dean of the new school is Dr. Pum Sak Han, one of 10 South Korean physicians who came to the United States in 1945 to train at Harvard, Johns Hopkins and Michigan.

Einstein Medical School

Ground was broken on October 25 for the Albert Einstein College of Medicine to be constructed in New York City. The college will be the initial unit in a $25 million medical teaching center.

Seven hundred applications for admission to the college have already been received. The first class, to consist of 100 freshmen, will be admitted in the fall of 1955. Some 300 applications for teaching posts have been received. The college plans to maintain a ratio of one instructor to each six students.

National Health Council

Philip E. Ryan has been appointed executive director of the National Health Council to succeed Dr. Thomas D. Dublin, who has resigned to accept a position with the National Foundation for Infantile Paralysis.

Mr. Ryan, who has been serving as special assistant to the director of the National Social Welfare Assembly, recently returned from Korea where he was an advisor on health, welfare and education in the civil assistance program of the U. S. Army. He was formerly chief of mission for the International Refugee Organization in the U. S. Zone of Germany.

Foreign Students

A recent report by the Institute of International Education shows that half of the schools in this country now have some foreign students in attendance. The largest proportion—34 per cent—come from Asia and the near east. Equal numbers—23 per cent—come from Latin America and Europe. Canada sends some 14 per cent of the foreign students and the remainder come from Africa (3 per cent) and other places.

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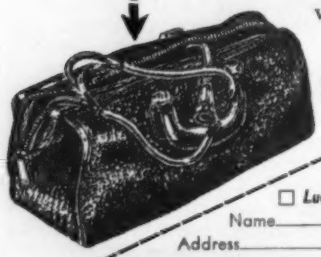

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Most foreign students receive support from a number of sources. A large number provide their own funds. Private organizations, the school they attend, part-time work and their own government are other sources of funds. The U. S. government helps support some 11 per cent of foreign students in school in this country.

Psychiatric Study

Thirty-three American psychiatrists have reappraised the work of military psychiatry during World War II and have reached the conclusion that the policies mistakenly followed at that time cost the United States the military use of a major portion of the million men who received discharges for personality and psychiatric reasons. Their conclusions will be published in November in "Psychiatry and Military Manpower Policy: A Reappraisal of World War II," a study by the Conservation of Human Resources Project of Columbia University's Graduate School of Business.

Now in the midpoint of its original five-year cycle, the research undertaking was established in 1950 by Dwight D. Eisenhower, then president of the university, as a result of the wastage of manpower revealed to him by the experiences of World War II. The Conservation of Human Resources Project is a cooperative undertaking of Columbia University, public groups such as foundations, trade unions, the federal government and the business community.

The study of marginal groups is one of three major areas of research undertaken by the project. The first part was a study of the uneducated, a survey of the war and post-war records compiled by the selective service, the armed forces and the VA on the million and a half illiterates who were rejected or served in World War II.

The project will also study two other major fields — individuals of superior ability and the changing status of the American worker from 1890 to 1950.

Fellowships, Grants, Awards

Rockefeller Foundation

The recently released Rockefeller Foundation annual report for 1952 reveals that $3,599,698 was expended for support of work in medicine and public health during the past year. Substantial sums went to medical schools for special projects.

American medical schools receiving Rockefeller grants included the following: Washington University received $73,500 to cover a five-year period of development in the department of public health and preventive medicine. An experimental four-year program in legal medicine at Harvard University is being carried out with a grant of $100,000, and an additional grant of $30,000 for two years supports a personality development program at the same school. A grant of $56,250 has gone to the University of North Carolina for aid in the research and planning of a state-wide health and medical care program. Research in psychotherapy at Indiana University is being supported by a $56,500 grant over a period of three years. At the University of Cincinnati the department of psychiatry has received $40,000 to assist in the psychiatrists-in-training program.

Announce Scholarship

A scholarship in the Northwestern School of Law is open to someone possessing an M.D. degree and an interest in legal medicine. The award is $825 a year toward tuition and fees with any balance for living expenses. The recipient is to be selected by Dean Havighurst of the university law school.

College Briefs

Boston University

DR. SHIELDS WARREN, pathologist, has been elected chairman of the executive committee of the board of trustees, according to an announcement by President HAROLD C. CASE of the university. He has been a trustee since 1938 and a member of the executive committee for the past 11 years.

DR. C. WESLEY SEWALL and Dr. SAMUEL R. MEAKER have retired with 33 and 31 years service, respectively. Dr. Sewall, head of the department of obstetrics, joined the university in 1920 after serving as a captain in the U.S. Army Medical Corps in World War I. He is a graduate of Boston. Dr. Meaker, professor of gynecology, taught at both Harvard and Boston University. A graduate of Princeton and Harvard, he served in the Royal Army Medical Corps in World War I. He is the author of several books and numerous articles in his field.

University of Calif., S. F.

DR. FRANCIS SCOTT SMYTH, dean, has been appointed to the Board of Foreign Scholarships for a term of three years by President Eisenhower. The board is concerned with the management of the Fulbright Fellowships program of the Department of State. Dr. Smyth for several years has been involved in the administration of medical fellowships for foreigners coming to the United States and Americans going abroad.

A drive to obtain $200,000 toward construction of physical education, social and recreational facilities at the medical center has been started by alumni of all four schools and colleges on the campus. The funds will help finance construction of a medical center memorial union building, dedicated to the services of medical center graduates during World Wars I and II. The $200,000 being sought represents only a small part of the $2,800,000 total cost of the proposed combined structures. At its last session, the state legislature appropriated $2 million to build a seven-story nurses' home, interns' quarters and parking facilities. The associate students of the medical center have already raised $200,000 toward the cost of construction of the memorial union. In addition, the regents have agreed to seek matching funds.

Columbia University

Twenty-four men and one woman with long records of service to medical science received the first Distinguished Service Awards ever to be made by the Columbia-Presbyterian Medical Center. The awards, in the form of bronze medallions, were presented October 13 at an academic convocation climaxing the two-day 25th anniversary celebration at the center. All of the recipients have been associated for many years with the center, most of them as professors in the college and as consultants at Presbyterian Hospital. Their total service to medical science is more than 1,100 years and the average term of service is 45 years.

A grant of $79,110 has been received from the Damon Runyon Memorial Fund for six projects under the guidance of DR. ALFRED GELLHORN, director of the Institute of Cancer Research.

Duke University

The third Medical Town Hall, on rheumatic fever, was held October 25. The emphasis again was on audience participation. DR. GEORGE BAYLIN is in charge of the series of programs for the lay public, aimed at improving general knowledge regarding leading causes of ill health.

Medical College of Georgia

DR. ROBERT B. GREENBLATT, professor of endocrinology, participated recently in the following seminars: September 28-October 3, he was moderator of the panel discussion on "Disorders of the Adrenal Cortex," in charge of the session on laboratory procedures and assays and lectured on Cushing's disease at the postgraduate course in endocrinology and metabolism, which was sponsored by the University of Minnesota at Minneapolis; in Washington D. C. he took part in the panel discussion on gynecological problems at the 25th annual scientific meeting of the Medical Society of the District of Columbia on October 5. Following this, he moderated a seminar on the adolescent girl and her menstrual problems at the meeting of the American Academy of Pediatrics in Miami, October 6-9.

George Washington University

Assistant Secretary of Defense MELVIN A. CASBERG addressed the largest freshman class in the history of the school of medicine at the 130th opening assembly September 21. The class, with its 102 students, brings the total enrollment this year to 350. Dr. Casberg spoke on "The Art of Medicine."

Heart disease is the subject of a postgraduate course offered this fall for physicians in the Washington area. The 14-week course began October 8 and is held on consecutive Thursday evenings.

DR. RONALD A. COX, professor of ophthalmology, has been named a member of the American Board of Ophthalmology's certification committee. He is also ophthalmic consultant to the new National Institutes of Health in Bethesda.

DR. JONATHAN M. WILLIAMS, associate in neurological surgery, has been elected an honorary member of the Medical Society of the Dominican Republic, according to an announcement from the office of DR. LUIS DE THOMEN, ambassador to the United States from the Dominican Republic.

Harvard University

A new cooperative attack on the emotional difficulties and behavioral problems which affect children today is being launched by the medical school, the Children's Hospital and the Judge Baker Guidance Center. The three institutes are bringing together their resources in a program of treatment, research and teaching in the field of child guidance and psychiatry. DR. GEORGE E. GARDNER will direct the cooperative program. He will continue as director of the Judge Baker Center, which he has headed for 12 years. He now becomes clinical professor of psychiatry and psychiatrist-in-chief at the hospital. Under the cooperative plan, doctors-in-training will have the opportunity to acquaint themselves with all types of childhood disorders and will gain a better grounding in the psychiatric aspects of health and illness, especially as they appear in childhood.

DR. WILHELM SIEGMUND FELDBERG, fellow of the Royal Society, gave a series of three lectures on the autonomic nervous system and chemical transmission of nerve effects under the Edward K. Dunham Lectureship for the Promotion of the Medical Sciences. Dr. Feldberg is head of the physiology and pharmacology laboratory of the National Institute for Medical Research, London.

University of Illinois

The United Cerebral Palsy Association has awarded several grants in support of research and teaching programs. A grant of $19,313 has been received for research in cerebral palsy with emphasis on disability evaluation and the application of physiological techniques for the facilitation of motor learning. This grant is under the direction of DR. F. A. HELLEBRANDT of the department of physical medicine and rehabilitation. The association also has renewed a $10,000 grant for the

investigation of the neuropharmacological aspects of cerebral palsy which is being conducted by DR. KLAUS R. UNNA of the department of pharmacology.

The first residence hall for students enrolled in medicine and allied health sciences was formally opened on September 27. The hall can accommodate a maximum of 405 students. Private financing was employed by the university to construct and equip the $2,450,000 nine-floor building.

DR. HEYWORTH N. SANFORD, who has served as acting head of the department of pediatrics since September 1952, has been appointed head of the department. He also holds the position of professor of pediatrics. The appointment fills the vacancy created when DR. HENRY G. PONCHER resigned last year to enter private practice. Dr. Sanford has been a member of the faculty since 1941.

DR. WILLIAM R. BEST of the department of medicine received a $5,400 grant from Eli Lilly and Company for the study of the effect of drugs and hormones on the production of antibodies destructive to red blood cells in acquired hemalytic anemia.

Jefferson Medical College

DR. JULIUS M. COON has been named professor of pharmacology and head of the department to succeed DR. CHARLES M. GRUBER who retired from the position after 21 years of service. Dr. Coon has been associate professor of the University of Chicago and director of its Air Force radiation laboratory.

A continuation grant of $35,780 has been made by the Public Health Service to DR. JOHN H. GIBBON JR. for development and perfection of the extra-corporeal heart-lung device for use with human patients.

College of Medical Evangelists

The annual honors award of the Biological Photographic Association went to the film, "Local Anesthesia in Dentistry," photographed and produced by EDWARD HAMILTON. Given at the association's annual convention held earlier this month in Los Angeles, the award is the organization's highest honor. The film's scientific authors are DR. NIELS B. JORGENSEN of the school of dentistry and DR. JOHN HUGHES of the school of medicine.

The school of tropical and preventive medicine has received $32,300 from the Office of the U.S. Army's Surgeon General to continue a study of the control of plague vectors under field conditions. A three-year program of research under the direction of RAYMOND RYCKMAN began June 1, 1951, and ends May 31, 1954.

The research fellowship training program began last month when the graduate council approved requests from three sophomore medical students to begin a 24-month training program leading to an M.S. degree. Two students will pursue assignments in the physiology department and one will do advanced work in the anatomy department.

DR. BRUCE W. HALSTEAD will give a review of the present status of fish poisoning in the Pacific at the Eighth Pacific Science Congress, to be held on the campus of the University of the Philippines November 16-26.

University of Michigan

Some 5,000 medical alumni attended the fifth triennial medical conference October 15-17. Sixty staff doctors presented papers on latest developments in research. In addition, eight outstanding medical alumni presented papers.

University of Minnesota

Homecoming clinics will be held at the University Hospital November 6-7. The program will feature DR. O. J. CAMPBELL, president of the Minnesota State Medical Association, who will discuss "The Responsibilities of Organized Medicine."

A continuation course in obstetrics for general physicians will be held in the Center for Continuation Study, December 3-5. The course will be

ARTIST's impression of the $256,000 Crippled Children's Division building which will be started on the University of Oregon Medical School campus this year. The building will contain administrative offices, therapy facilities and outpatient clinic.

presented under the direction of DR. JOHN L. MCKELVEY, professor and head, department of obstetrics and gynecology.

Northwestern University

The fourth annual cancer lecture series began October 7 and will continue for seven consecutive Wednesday evenings. Open to members of the medical profession, the series will cover brain, eye, pancreas, thyroid and pigmented skin tumors, diagnosis of breast cancer, enzymes and cancer and radiation in treatment of tumors. Lecturers will include: DR. OTTO SAPHIR, clinical professor of pathology, University of Illinois; DR. WARREN COLE, professor of surgery, University of Illinois; DR. AUSTIN BRUES, director of biological and medical research, Argonne National Laboratory; DR. JAMES W. KERNOHAN, head of the section of pathologic anatomy and neuropathology, Mayo Clinic; DR. A. B. REESE, professor of ophthalmology, College of Physicians and Surgeons, Columbia University; DR. JESSE P. GREENSTEIN, chief of the laboratory of biochemistry, National Institutes of Health; DR. RICHARD B. CATTELL, Lahey Clinic, and DR. ARTHUR C. ALLEN, associate pathologist, Memorial Center for Cancer and Allied Diseases.

University of Oregon

Bids have been received for the medical school crippled children's division administration building and outpatient clinic. Land has been cleared for the $256,000 structure and work is expected to begin immediately after the contracts have been awarded.

DR. GUISEPPE MORUZZI, authority on the physiology of the brain from the University of Pisa, delivered the annual Sigma Xi lectures at the school in September. He was accompanied to the United States by DR. ALBERTO ZANCHETTI, who will remain at the medical school for a year, studying and conducting research under DR. JOHN M. BROOKHART, professor and head of the department of physiology.

DR. CLARE G. PETERSON, associate professor of surgery, is on a three-month assignment, studying and observing surgical procedures in Boston and other eastern cities. He is making his headquarters at Peter Bent Brigham Hospital, and will study under surgeons from Harvard and Boston University medical schools.

A booklet, "Tomorrow's Doctor," designed to guide and encourage the young person planning to enter the field of medicine, has been published by the school. Supplies of the illustrated booklet have been requested by premedical advisers throughout the northwest and it will soon be distributed to high school advisors by the Oregon Division of Vocational Education.

Recent gifts and grants to the school include $14,000 from the Public Health Service to be used for continuation of the cardiovascular training program; $17,000 from the Damon Runyon Memorial Fund for Cancer Research to the dermatology division for the study of metabolism of melanomas; and two grants from the International Minerals and Chemical Corporation of Chicago, one of $15,400 to be used by DR. HENRY A. DIXON in the department of biochemistry and the division of functional medicine, and another of $5,000 to be used by DR. E. S. WEST in a study of creatine phosphate.

General surgery, the second postgraduate course of the fall-winter series, opened October 26 at the school. Guest speakers will be DR. VICTOR RICHARDS, assistant professor of surgery from Stanford, and DR. H. THATCHER, Portland surgeon.

University of Pennsylvania

Physicians from all parts of the United States attended the fourth annual institute of the Graduate School of Medicine, September 21-25. This year's theme was "Advances in Medicine and Surgery." More than 60 medical celebrities were faculty for the week of meetings.

Stanford University

WARNER P. GEIGENMULLER has been named superintendent for the University Hospitals, and DR. GEORGE BERNARD ROBSON has been named acting assistant dean of the medical school. Both posts were previously held by DR. WILLIAM H. NORTHWAY, professor and head of the division of physical medicine. Dr. Northway had asked to be relieved of the two administrative jobs in order to spend full time on medical and teaching duties. Mr. Geigenmuller was formerly assistant superintendent of the hospitals and Dr. Robson is an associate clinical professor of the school who joined the faculty in 1937.

The annual postgraduate conference in ophthalmology will be held March 22-26, with registration limited to 30 physicians who confine their practice to eye or to eye, ear, nose and throat.

State University of N.Y., Syracuse

DR. WALTER F. ROGERS JR., assistant professor of medicine, died unexpectedly September 18. He was widely known as an investigator in endocrinology and was among the first in the Syracuse area to use radioactive isotopes.

University of Tennessee

DR. CONLEY HALL SANFORD is retiring as chief-of-staff of the John Gaston Hospital and chief of the division of medicine at the college. He will continue as professor of medicine and as a private practitioner. Dr. Sanford has been chief-of-staff and chief of the division since 1939.

DR. PHIL C. SCHREIER has been appointed acting chief of the division of obstetrics and gynecology at the college and at John Gaston Hospital. He succeeeds DR. FRANK WHITACRE, who recently resigned to join the staff of Vanderbilt. Dr. Schreier has been a member of the staff since 1924.

DR. ELMER E. PAULTER JR., formerly an instructor of pathology at the Bowman Gray School of Medicine, has joined the staff as an assistant professor of pathology and bacteriology.

University of Texas, Galveston

Recent visitors included DR. KNUD MOLLER, director of the pharmacology institute of the University of Copenhagen, who spoke on the treatment of barbital and morphine poisoning; DR. FRITZ EICHHOLTZ, director of the pharmacology institute of the University of Heidelberg, who gave a special seminar on newly discovered effects of carbon dioxide; DR. FRANCIS O. SCHMITT of the department of biophysics, Massachusetts Institute of Technology, and DR. JACK GADDUM of the department of pharmacology of the University of Edinburgh.

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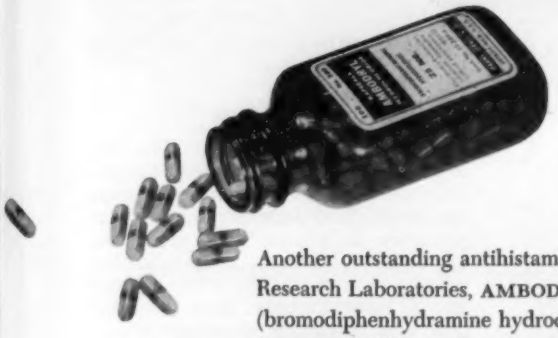

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1. McGavack, T. H.; Shearman, A. M.; Weissberg, J.; Fuchs, A. M.; Schulman, P. M., & Drekter, I. J.: *J. Allergy* 22:31, 1951.
2. Thomas, J. W., & Kelly, F. R., Jr.: *Ann. Allergy* 9:481, 1951.

MEDICAMENTA VERA

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Gen. JOHN REES of London, director of the World Federation for Mental Health, was a special speaker on October 16 when he discussed "The Promotion of Community Mental Health." The visit of General Rees was sponsored by the Hogg Foundation for Mental Hygiene of the University of Texas.

A special seminar on the history of social psychiatry will be held each Tuesday throughout the academic year, under the direction of the department of psychiatry. The seminar group will study various psychological factors which contribute to psychiatric disorder among groups of people.

Dr. HUGH DE WARDENER of St. Thomas' Hospital, London, was a guest speaker on October 30. He discussed newly-discovered aspects of kidney function.

An anonymous benefactor has given $12,000 to build special quarters in the Ashbel Smith building to serve as a student lounge. The new facility was dedicated on October 7 and will contain student, committee and meeting rooms in addition to a general lounge for recreation and social gathering.

Dr. KENNETH N. EARLE of the Neurology Institute at McGill has accepted an appointment as associate professor of neuropathology at the medical branch hospitals.

University of Washington

A half-million dollar legacy from the estate of Dr. EVERETT O. JONES, pioneer Seattle surgeon who died recently, has been accepted by the board of regents. Under the terms of a trust created by Dr. Jones shortly before his death, the annual net income from the estate will go to his sister during her lifetime. Thereafter the income will be turned over to the university to establish and maintain the Dr. Everett O. Jones Scholarship and Loan Fund to provide grants and loans to worthy students in the school of medicine. The bequest is the largest of its kind ever received by the school. Income from the estate is estimated at more than $20,000 per year.

Dr. LELAND E. POWERS has resigned as head of the department of public health and preventive medicine and has been granted leave of absence to accept an appointment to the faculty of the American University in Beirut, Lebanon. He will be in charge of a new program in public health and preventive medicine now being developed for the Near East and Africa in the medical school.

University of Wisconsin

Recent promotions include: Dr. HARLAND W. MOSSMAN, from associate professor to professor of anatomy; Dr. EDGAR S. GORDON, from associate professor to professor of medicine; Dr. MARC J. MUSSER, from associate professor to professor of medicine; Dr. H. KENT TENNEY, from associate professor to clinical professor of pediatrics; Dr. PETER A. DUEHR, from associate professor to clinical professor of ophthalmology.

Yale University

Dr. GREGORY ZILBOORG, psychiatrist and author, is delivering six lectures at Yale this fall as part of his receiving the Isaac Ray Award for 1953. His general topic is "The Psychology and Psychopathology of the Criminal Act and Punishment." The Isaac Ray Award is presented by the American Psychiatric Association to a lawyer or psychiatrist to promote better understanding between the psychiatric and legal professions. The recipient receives $1,000 and is asked to give a lecture series at a university which incorporates both law and medical schools.

Audiovisual News

Creeping Television: A Prophecy for Medical Schools

TELEVISION IS OLD and tried enough in its applications to the medical and health sciences to permit a calculated prediction as to its directions and course of development. Such a prediction may have the simple value of providing a few guide posts to many medical educators in what may be a dark and unmapped wilderness of speculation.

1. All medical schools will be involved in medical and health television. TV will come to all schools, sooner or later, whether they are small or large, in metropolitan or small city localities.

2. Compatible color television, probably of the NBC variety, will be the rule. Such color TV will be the standard general telecast TV of our homes. The medical colleges and big medical teaching centers will have the same system, for reasons detailed below.

3. All new classrooms and staff-rooms will have large screen projected image TV. This equipment will be mass-produced for educational purposes before long. It is the current business of medical center architects to ready the schools and hospitals for this reception equipment.

4. The encroachment of medical TV into the lives of medical faculty members will probably happen by a process which may be termed "creeping television." The three steps of the creep appear likely to be as follows.

A. Local commercial or educational TV stations will recognize the high Hooperating of medical subject matter (as many schools already can testify). A program will be organized. TV writers and directors will find interested, even enthusiastic faculty personnel, for there are many among us. A bent for showmanship on the part of a few staff doctors, an eager public, and the school early will find it difficult *not* to engage in an endless vista of programs year after year. Who will inherit the work? Who has the assets? Who will find that these lay health programs bring name and prestige from the public, and money from legislatures and philanthropic sources? The medical schools.

B. From lay health education to postgraduate teaching of practitioners is a short step by TV. Carried to their hospitals by coaxial cable, or beamed into their homes by scrambled image techniques, medical-school produced "telecourses" (to use the Western Reserve name) may well be just around the corner. Such telecourses will be true courses, with examinations and some type of certification. Who will inherit the job? The medical centers, naturally. And who will pay the bill for the costs of production? The practitioners. But who will get the principal credit for all this work? The schools will *not* unless they show some initiative of a superior type.

C. Because health and science programs are difficult to stage in a downtown studio, and because the work in postgraduate medical TV will demand *equipment within the medical center facilities* (in OR, clinics, demonstrational rooms, autopsy room, etc.), it will be natural to use the personnel, on-the-spot equipment, and experience for those selected undergraduate teaching situations where the cost of production and the applicability of TV suggest effective use. Such use will apply to nurses, pharmacists and other students of the medical center as well as to medical students. Use will not be

for many hours a week, comparatively speaking. But it will happen. Medical schools in a region can share faculties via TV, of course, as they succeed in dissolving their walls of isolationism.

This process of year-by-year creep will have at least one merit. Experience will come *from* commercial showmanlike television downward *toward* didactic classroomism in the schools. Enroute there may be a healthy admixture of professional production thinking and approaches which will enliven and make more effective the current teaching methods. The impact may be a strong one in the improvement of classroom teaching.

The combination of public, postgraduate and undergraduate medical TV responsibilities will create demands for small but effective programming, coordinating and technical staff in each medical center. Different attitudes will develop among schools who share faculty TV efforts, between faculties and their TV students at home and in the countryside and, most important of all, among faculty members themselves. Perhaps in the end television will contribute more than its share toward bringing prestige and reward for good teaching in medicine. And this will be some added recompense for the hard work, the cost of equipment, and the traumatic changes which will occur enroute.—DAVID S. RUHE.

Unexpected Economies in TV Predicted

The National Citizens Committee for Educational Television believes that the cost of building and operating a television station is likely to be lower than many people think. This is accounted for by: lower prices than formerly of basic items such as transmitters and cameras; discounts from manufacturers to educational stations; fewer technicians required to operate modern equipment; adequacy of simple, unadorned studios, often already at the disposal of an educational institution (few educational stations have had to build studios); and generous commercial interests supplying towers, studios and equipment.

Members of the committee state, however, that the key to economy is the "demonstrated efficiency of television as a means of communicating understanding."

Summaries of Film Reviews

Scabies

26 min., sd., b&w., 16 mm., 1946.

The life cycle of the mite *Sarcoptes scabiei* is filmed, revealing the characteristics of adults walking and burrowing, the distribution and nature of mite burrows, and eggs and larvae of various stages as they are observed when scraped from the burrows. The entire life cycle is depicted in animation. The clinical distribution of scabietic skin lesions is demonstrated, and also the course of a typical lesion from mite burrow to the stage of secondary bacterial infection. Historical remedies are contrasted with benzyl benzoate and sulfur ointment therapy. In a worker's family the epidemiological patterns of familial contact are stressed in order to demonstrate proper control measures.

The contents and fabrication of this film are admirable; indeed, they constitute almost a model of straightforward scientific film production. Life cycle, clinical and epidemiological materials are clear and relatively timeless, although the section on therapy is foreordained to change and constant criticism as knowledge becomes more precise.

Used in whole or in parts, the film will adequately transmit its message to students of many types, and is deserving of wide ownership and extensive classroom or staffroom utilization. Fortunately, the film is segmented into its four parts, and lends itself readily to use in parts. One portion, the life cycle segment, exists as an independent film under the title "Scabies Mite."—*D.S.R., with MAVI Panel, 1950.*

Audience: Students of parasitology, dermatology and public health.

Production Data: Sponsor: Ministry of Health; **Producer:** Ministry of Information, London; **Script and Direction:** Robin Carruthers; **Camera:** H. N. Edwell; **Cinemicrography:** Frank A. Goodliffe.

Distribution: British Information Services, 30 Rockefeller Plaza, New York 20, N. Y., **Sale:** $75 and **Loan.**

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1. Kaufman, R., and Farmer, L. (1951), Norisodrine by Aerohalor in Asthma, Ann. Allergy, 9:89, January-February.
2. Swartz, H. (1950), Norisodrine Sulphate (25 Per Cent) Dust Inhalation in Severe Asthma, Ann. Allergy, 8:488, July-August.
3. Krasno, L., Grossman, M., and Ivy, A. (1949), The Inhalation of 1-(3',4'-Dihydroxyphenyl)-2-isopropylaminoethanol (Norisodrine Sulfate Dust), J. Allergy, 20:111, March.

1-60

Sandfly Control

34 min., sd., color, 16 mm., 1946.

In a Sicilian invasion setting, the sandfly, *(Phlebotomus sp.)* is introduced, and its life cycle and world distribution described. The environment and victims of human sandfly fever are shown. Clinical signs and symptoms are demonstrated. The nature and course of cutaneous leishmaniasis is shown in a series of clinical cases from the Middle East. A patient with mucocutaneous leishmaniasis is demonstrated, with shots of the South American jungle. Locale shots in Asia, the Middle East and South America provide background for an Indian case of visceral leishmaniasis; diagnosis, treatment and public health aspects are discussed. Bartonellosis of the verruga peruana stage is demonstrated in numerous Andean Indians; the disease's natural history is described; the acute aroya fever stage is demonstrated. The life cycle, flight habits, and nocturnal feeding of sandflies are illustrated; methods of insect capture are shown; methods of sandfly protection and DDT killing are demonstrated as applied variously to individuals, dwellings and areas.

This film is perhaps seven films in one: the three families of diseases transmitted by sandflies which comprise five disease entities, the life habits of the Phlebotomus, and its control. Since the film attempts to cover such an enormous range of clinical, ecological and public health data, it is necessarily superficial. The content was amassed and winnowed through cautious and authoritative hands, so that there is a high order of accuracy and, despite inclusion of the therapeutic and control measures, there is proportionately little current obsolescence. The material on the behaviour and life cycle of sandflies and the rich clinical material on bartonellosis are much the best of the film's contents. Organized as a chapterized illustrated lecture, from film apparently assembled in large measure from existing footage collected without plan, the narration provides the continuity. There is much up-and-down photographic quality in the field-shot footage; monochrome animation in a color film seems out of place; and the characteristic opening and closing martial music is as usual inappropriate for most classrooms. Nevertheless, the overall film documentation is functional and reasonably adequate for its purposes.

As a complex and extremely varied document on five exotic diseases transmitted by a single vector, this film is a mine of footage for the teaching of certain tropical diseases rarely observed in the world areas of effective public health practice. This film is subdivided by titles, and lends itself readily to use in parts, and to purchase-self-editing practices. Because of its sketchy nature, it should ideally be used in integrated presentations by expert instructors.—*D.V.M. and D.S.R., with MAVI Panel, 1951.*

Audience: Students of medical parasitology, tropical medicine and public health.

Production Data: Sponsor - Producer: U. S. Army; **Scientific Advisor:** Marshall Hertig, Ph.D., Major (MSC), A.U.S.

Distribution: Apply Commanding General, Attention: Surgeon (of Army Area concerned) or Armed Forces Institute of Pathology, 8th St. and Independence Ave., Washington 25, D. C. for applicants in the District of Columbia and foreign countries; **Loan** (giving Code No. PMF-5028).

Arthropod-Borne Virus Encephalitides

33 min., sd., b&w., 16 mm., 1947.

After an introduction stating that every environment has its diseases, a soldier with Japanese B encephalitis is given a neurological examination, and blood and spinal fluid are drawn for diagnostic tests. World distribution of the encephalitides is covered; hosts and arthropod vectors are indicated. Laboratory diagnosis is made of the case by complement fixation and mouse protection tests, and by cerebrospinal fluid data. Okinawan encephalitis cases are contrasted with a polio patient. Post-encephalitic sequelae are shown in Okinawans. Epidemiological and public health procedures are demonstrated, including search for human cases and mosquito vectors.

This film is in large part a record of the Japanese B encephalitis epidemic among troops and population in Okinawa in 1944, but it is also an orientational essay on encephalitides, with Japanese B as the type disease. The scientific material is of a high order of accuracy, but there are a number of omissions; and since the time of film release a number of important new facts have been determined. The film is a superior illustrated lecture, organized in the main as a textbook chapter, and dominated by its narration; not-

withstanding, it shows superior cinematographic skills in direction, camera, editing and sound.

The forceful clinical and laboratory diagnostic sequences are clean and explicit. By contrast, the control and investigational measures are less clear in message. The distribution-host-vector diagrams appear out of logical order. Yet the broad facts of Japanese B encephalitis, its Pacific ecology and something of its differential diagnosis are well transmitted to suitably prepared audiences. The film lends itself to use in whole or in its parts.—*D.V.M. and D.S.R., with MAVI Panel, 1951.*

Audience: Students of medicine and public health.

Production Data: Sponsor - Producer: U. S. Army.

Distribution: Apply Commanding General, Attention: Surgeon (of Army Area concerned) or Armed Forces Institute of Pathology, 8th St. and Independence Ave., Washington 25, D. C. for applicants in the District of Columbia and foreign countries; **Loan** (giving Code No. PMF-5048).

Clinical Malaria

28 min., sd., b&w., 16 mm., 1944.

Malaria's world distribution and methods of spread provide an introduction to the erythrocytic cycle of the malaria parasite and its relationship both to the general clinical symptomatology of the three parasite species and to the typical malaria paroxysm. Falciparum malaria's dangerous characteristics are stressed. Brief attention is given to laboratory diagnostic methods, and to the problems of relapse, treatment and prevention.

This orientational film is now seriously obsolescent in its presentation of many aspects of the biology of the malaria parasites, in its anti-malarial drug data, in the factors asserted to influence relapse, and in details of the methods of prevention. There is overemphasis on epidemic malaria. The diagnostic thin film rather than the thick smear is given prominence. The unwise policy of therapy on suspicion is stated. In short, the film is the product of the military medical concepts of 1943-44. The film is competently organized and fabricated, and the production is professionally skillful, with the exception of the poorly directed ward walk. The military uniforms and settings might well have been minimized for broader utilization both in peace and war.

Ten years of intensive research have created many shortcomings of content, so that the instructor must be wary in utilizing this film. Notwithstanding, the film is a valuable introduction to clinical malaria for all students of this disease, and its high productional caliber maintains its importance as an historical complement to more up-to-date instructional tools.—*R.T. and D.S.R., with MAVI and NYSMS Panels, 1952.*

Audience: Students of medicine, public health and parasitology.

Production Data: Sponsor: Bureau of Medicine and Surgery, U. S. Navy Department; **Producer:** Audio Productions, Inc., New York, N. Y.

Distribution: Sale: United World Films, 1445 Park Ave., New York 29, N. Y., $32.27; **Loan:** Audio-Visual Training Section, Bureau of Medicine and Surgery, U. S. Navy Department, Washington 25, D. C. (give Code No. MN-1965).

Adventure in Sardinia

22 min., sd., b&w., 16 mm., 1950.

The gravity of the malaria problem on the island of Sardinia is graphically documented. The breeding places of anopheline mosquitos and stages in their life history are depicted. The joint project initiated in 1946 by UNRRA and the Rockefeller Foundation in an attempt to eliminate malaria from the island is outlined. The training of control personnel, the DDT residual spraying of buildings, the application of larvicide to streams, marshes, ponds and puddles, and finally the draining away of all standing water are shown and their contributions to the control program assessed. The film closes on a triumphant note when, in the spring of 1950, a bugler announces in a village square that for over a year there have been no new cases of malaria, and that with health has come hope.

This is a straightforward and accurate account of a great public health demonstrational project. Although it presents a considerable amount of factual information, the film is essentially a report on the urgent need for the eradication of malaria from Sardinia and how various forces were organized to actually reach this goal. This production is an example of the excellent use of the motion picture medium in documenting a vital public health milestone of our time. It represents the happy blending of scientific information, socio-economic ingredients, human emotions, and field and laboratory anti-malarial operations into one compact and clear presentation.

Since the film tells its story with great

conviction and treats the subject of malaria control in a clear and detailed manner, viewing of the film should be a valuable experience for varied lay and professional groups.—*A.K., with MAVI Panel, 1951.*

Audience: Students of preventive medicine, public health and sanitary engineering, lay groups concerned with malaria control.

Production Data: Sponsor: Economic Cooperation Administration of the U. S. Government; **Producer:** British Pathé Documentary Unit; **Direction:** Jack Chambers and Arthur Elton.

Distribution: Loan: A-F Films, Inc., 1600 Broadway, New York 19, N. Y. (50c service fee); **Sale:** Castle Films, 1445 Park Ave., New York, N. Y.

Technic for Mitral Commissurotomy

25 min., sd., color, 16 mm., 1952.

Diagrams and specimen photographs introduce a 21-year-old mitral stenosis patient, positioned for surgery. A seventh-rib posterolateral incision is made, with resection of segments of the seventh and sixth ribs. The pericardium is opened, exposing the left auricular appendix. Animation anticipates the procedure of commissurotomy because of visual difficulties in the actual performance; in sum, the tip of the finger, protected by a purse-string suture, is inserted into the auricular appendix, forces a linear fracture of the stenosed mitral valve as it plunges through, and is withdrawn. The real procedure is portrayed as far as is visibly possible, and the wound is closed.

This film, apart from the method of commissurotomy proper, demonstrates a personal rather than a standard or variation of a standard technique, including as it does an unusual posterolateral approach with rib resection, and procaine injection into the pericardial sac. Technically, the film has been carefully planned. The merits of a mobile camera, graphic animation, and precise narration are reduced somewhat by less than optimal lighting and by actions difficultly discernible upon the rapidly beating heart.

To cardiac surgeons the film in toto will present one surgeon's technique. To nonsurgeons the operation will present one-sided and incomplete information, requiring the presence of a trained cardiac surgeon for discussion. The diagrammatic and real commissurotomy sequences have real general teaching applicability, and might be used as excerpt material.—*A.N., with MAVI Panel, May 1953.*

Audience: Intended for students of cardiac surgery.

Production Data: Sponsor: Catholic Charities of the Archdiocese of New York: **Author:** John L. Madden, M.D., St. Clare's Hospital, New York City; **Producer:** Sturgis-Grant Productions, Inc.

Distribution: Sturgis-Grant Productions, Inc., 314 E. 46th St., New York 17, New York, **Sale:** $150; **Rental:** $10.

Congenital Malformations of the Heart

(Reel III: Cyanotic Congenital Heart Disease)

29 min., sd., color, 16 mm., 1953.

The nature of cyanosis and its etiology through reversal of normal heart flow or obstruction of the pulmonary stream are shown in diagrams and cases. Tricuspid atresia, the tetralogy of Fallot, the Eisenmenger complex, truncus arteriosus, and transposition of the great vessels are demonstrated with animated heart diagrams. The approach to diagnosis is outlined: physical signs, oxymetry, and cardiac catheterization. Heart conformations as seen by fluoroscopy are emphasized. The principles of Blalock and Potts' surgical approaches to solution of the tetralogy of Fallot syndrome are illustrated schematically.

This third film of a series comprises an accurate scientific presentation of a range of cardiac and great vessel anomalies whose common clinical manifestation is cyanosis. The film is organized as an illustrated lecture of highly concentrated substance and of essentially non-moving materials; notwithstanding, the beautiful animated drawings and superior productional skills produce audience enthusiasm. One might question the section on fluoroscopic diagnosis as inadequate for teaching in this presentation.

The format and high specific gravity of the contents suggest that the film is most suitable for review purposes, although repeated showings or showings in part may be profitable.—*D.S.R., with MAVI and NYSMS Panels, 1953.*

Audience: Medical students, interns and residents, practitioners.

Production Data: Sponsor: Dr. & Mrs. Maimon Samuels, Seattle; **Scientific Advisor:** Robert F. Rushmer, M.D., department of physiology and biophysics; **Producer:** department of medical illustration, University of Washington School of Medicine, Seattle; **Direction and Animation:** Ralph E. Pearson, **Camera:** Jack Newby; **Medical Illustration:** Jessie W. Phillips.

Distribution: Film Center, University of Washington, Seattle 5, Wash., **Sale:** $195, **Rental:** $4.25 (west of the Mississippi); and the Committee on Medical Motion Pictures, American Medical Association, 535 N. Dearborn St., Chicago 11, Ill., **Rental:** $3.

Accompanying Materials: 17 slides from film, with mimeographed description of each.

Book Reviews

Adrenal Cortex

Transactions of the Fourth Conference, November 12-14, New York. Edited by **Elaine P. Ralli, M.D.**, associate professor of medicine, College of Medicine, New York University. Sponsored by Josiah Macy Jr. Foundation, New York, N. Y., 165 pp. with index. $4.

This small book deals with a subject of increasing interest to both specialist and practitioner. Here the reader will find up-to-date information concerning the adrenal cortex presented in an informal fashion by a group of key investigators in this field. The editing has preserved the spirit of give-and-take, and the lively exchange of ideas, experiences, data and methods between members of the conference is most stimulating. In addition, in spite of its small size, this publication contains excellent illustrations, figures and charts. A carefully selected bibliographical list adds further to its value.

Although the manner of presentation of the subject matter makes it difficult to mention any single section as outstanding, the last chapter covers current views on adrenalectomy in man most adequately.

William G. Leaman,
Woman's Med. Coll.

Manic-Depressive Disease

John D. Campbell, M.D., chief psychiatrist, Peachtree Sanitarium, Atlanta. J. B. Lippincott Company, Philadelphia, 1953. 403 pp. with index. $6.75.

According to the author, this volume is an attempt to bring Kraeplin's monumental work on manic-depressive disorders up to date, and to correlate it with other advances in psychiatry. To achieve this aim, hundreds of manic-depressive patients have been studied and a group of 522 have been analyzed carefully and followed for a period of five years.

Campbell postulates the hypothalmus as the locale of the pathophysiology of manic-depressive psychosis. Though this view has been held by other psychiatrists, the thesis that the physiologic disturbance of the autonomic nervous system as the defective mechanism in cyclothynia is developed with clarity and is consistent with the work done by Selye in the adaptation syndrome. Another aspect of this disease which is referred to scantily in the literature is the occurrence of this syndrome in children. The author cites numerous case studies of children and points to the differences and similarities of this syndrome in children and adults. Social complications of manic-depressive psychosis, such as alcoholism, family discord, divorce, homicide and suicide are scrutinized.

There are some inaccuracies. Some of the diagnostic case studies of the children's series are questionable. Dr. Campbell comments frequently on the analytic school, but his impressions are not only inaccurate but untrue; i. e. "Some of the enthusiasts in the analytic school have advocated loose living and free love as a wholesome mental hygenic procedure."

This book is recommended for both the beginner and the researcher.

Louis Lunsky,
V. A. Center, Los Angeles

Films in Cardiovascular Diseases

David S. Ruhe, M.D.; **Adolph Nichtenhauser, M.D.**; **Leo L. Leveridge, M.D.**; **Henry J. Weintraub, M.D.**; **Norton M. Luger, M.D.** Medical Audio-Visual Institute of the Association of American Medical Colleges. Published jointly with the American Heart Association, 1953. 128 pp. Paper cover $1.50. Cloth cover $2.

The collection and publication of this material was made possible by a grant from the National Heart Institute of the U. S. Public Health Service. It represents a great deal of enterprise in locating widely scattered film recordings and then arranging for the critical review of the film by panels of selected experts. The critical and informed views of several authorities have been condensed into the summarized descriptions of each of 62 different films. Their subject content ranges through embryonic development of heart structures to therapy of peripheral vascular diseases.

Evaluations throughout are based on the expected grade of teaching usefulness even though some of the film is of the nature of research recordings. Additionally, data on 113 films are pre-

sented without reviews. An introductory discussion contains some highly valuable and realistic considerations of the general difficulties of film utilization in this field. The format is attractive. Repetition of about one paragraph of text on page 24 is not typical of the closely guarded detail which appears in most of the publication.

This material should be exceptionally valuable to those who anticipate using visual teaching material which is in any way related to the circulatory system. Without regard to teaching values, it should be reviewed by all who are students of cardio-vascular phenomena. Certainly this publication can be expected to develop a sounder approach among those who are engaged in this type of film production.

R. P. Walton,
South Carolina

Sandoz Atlas of Haematology

Sandoz Ltd., Basle, Switzerland. 1952. Profusely illustrated. Loose-leaf. 91 pp. with index. American office: Sandoz Pharmaceuticals, 68-72 Charlton St. New York 14.

As an atlas, this work is excellent. The 256 color photomicrographs are probably the best illustrations of blood and marrow cells available, and cover practically all the phases of morphological hematology that are likely to be met.

The accompanying text, however, could be improved greatly. If the atlas is used merely to assist in the identification of cells, the text could be shortened. If the purpose is to provide information about diseases of the blood, it would require expansion into a large textbook. The greatest value lies in its use together with a standard, exhaustive text.

Although published by a pharmaceutical company, there is no advertising material, and the only mention of the publisher's own product is in one plate and text, describing an experiment on anemia in rats.

The index is adequate. The bibliography consists of 67 references to standard texts and atlases, of which 15 are in English, and 40 references to publications on cases illustrated, six of which are in English.

The atlas is in a loose-leaf ring binder, cloth bound. Supplements to the first edition are available.

Maurice N. Richter,
N. Y. Univ.—Bellevue

Rorshach Interpretation: Advanced Technique

Leslie Phillips, Ph.D.; **Joseph G. Smith**, Ph.D. Grune & Stratton, New York, 1953. 385 pp. $8.75.

Concerned with objectifying and extending the scoring and interpretation of the instrument, this book is intended as a practical reference for the experienced Rorshacher. Generally, the Beck system is emphasized. References from the literature are cited to support many of the statements in this book; and in those cases where there is no evidence beyond the authors' clinical experience, they have attempted to make their hypotheses unambiguous and testable.

The final chapter deals with a section of a Rorshach protocal making use of concepts developed throughout the book. Appendices containing scoring categories are inserted for the reader's convenience.

Sexual Behavior in the Human Female

Alfred C. Kinsey; Wardell B. Pomeroy; Clyde E Martin; Paul H Gebhard, of the staff of the Institute for Sex Research, Indiana University. W. B. Saunders Company, Philadelphia, 1953. 842 pp. with index. $8.

This book is the second produced by Dr. Kinsey and his associates from data gathered in their long-range study of sexual behavior. In it the authors present statistics and analyses of the incidence and frequency of various types of sexual activity among women. While it is generally scholarly and scientific in approach, the reader is aware of some light overtone in Dr. Kinsey's reiteration of the unpredictability of the female.

Female sexual activity discussed includes pre-adolescent development; masturbation; nocturnal sex dreams; premarital petting; premarital, marital and extramarital coitus; homosexuality, and animal contacts. Each subject is reported in terms of age, marital status, educational level, parental occupation, rural-urban background and religious background. Every chapter is profusely illustrated with charts and tables. Data are summarized at the end of each chapter and are contrasted with like data on males, which were reported in the 1948 Kinsey report of "Sexual Behavior in the Human Male."

The most obvious weakness in the present study is that although 7,789 interviews were analyzed, only 5,940 were

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used. Geographical distribution in this group was poor with most of the subjects living in the middle west, and educational differences were not wide with 56 per cent of the subjects having some years of college. Dr. Kinsey and his fellow researchers are frank to recognize the weakness of their sampling, however, and they give the reader adequate warning.

Sociologists and psychologists probably have more interest in the Kinsey report than the medical profession at large. Some interesting and informative material on the psychological, hormonal and nervous system factors in sexual responses among women, however, should make it a valuable reference for psychiatrists and gynecologists.

Books and Pamphlets Received

(As space permits, those with the greatest interest to our readers will be reviewed)

Adventures in Physiology

Sir Henry Hallett Dale, O.M., G.B.E., F.R.S., M.D., F.R.C.P. Pergamon Press, London, 1953. American distributors. The Macmillan Company, 60 Fifth Avenue, New York 11. 652 pp. Illustrated. $19.50.

Renal Function

Transactions of the fourth conference, Oct. 22-24, 1952, New York. Edited by **Stanley E. Bradley,** M.D., associate professor of medicine, Columbia University College of Physicians and Surgeons. Sponsored by the Josiah Macy Jr. Foundation, New York, 1953. 189 pp. $3.50.

A Handbook for Dissectors, 4th edition

J. C. Boileau Grant, professor and director of the department of anatomy, University of Toronto; **H. A. Cates,** professor of anatomy, University of Toronto. The Williams & Wilkins Company, Baltimore, 1953. 425 pp. with index. Illustrated. $3.50.

A Guide to Human Parasitology, 5th edition

D. B. Blacklock, C.M.G., M.D., D.P.H., D.T.M., formerly professor of tropical hygiene, Liverpool School of Tropical Medicine; **T. Southwell,** D. Sc. Ph.D., A.R.C. Sc., F.Z.S., F.R.S.E., formerly Walter Myers lecturer in parasitology, School of Tropical Medicine, The University, Liverpool. Revised by **T. H. Davey,** O.B.E., M.D., D.T.M., professor of tropical hygiene, Liverpool School of Tropical Medicine, The Williams & Wilkins Company, Baltimore, 1953. Illustrated. 228 pp. with index. $5.50.

Historical Aspects of Organic Evolution

Philip G. Fothergill, B.Sc., Ph.D., lecturer in botany, King's College, University of Durham, Newcastle upon Tyne. Philosophical Library, New York, 1953. 427 pp. with index. $6.

Introduction to Laboratory Chemistry, 4th edition

L. Earle Arnow, Ph.G., B.S., Ph.D., M.B., M.D., director of research, Sharp & Dohme Division, Merck & Co., Inc. Revised with the assistance of **Marie C. D'Andrea,** R.N., B.S. in nursing education, educational director, School of Nursing, St. Vincent's Hospital, Indianapolis. The C. V. Mosby Company, St. Louis, 1953. 108 pp. Illustrated $1.50.

Introduction to Physiological and Pathological Chemistry

L. Earle Arnow, Ph.G., B.S., Ph.D. M.B., M.D., director of research, Sharp & Dohme Division, Merck & Co., Inc. Revised with the assistance of **Marie C. D'Andrea,** R.N., B.S. in nursing education, educational director, School of Nursing, St. Vincent's Hospital, Indianapolis. The C. V. Mosby Company, St. Louis, 1953. Illustrated. 508 pp. with index. $3.75.

Bailey's Text-book of Histology, 13th edition

Revised by **Philip E. Smith,** Ph.D., Sc.D., professor emeritus of anatomy, College of Physicians and Surgeons, Columbia University; **Wilfred M. Copenhaver,** Ph.D., professor of anatomy, College of Physicians and Surgeons, Columbia University, assisted by **Dorothy D. Johnson,** Ph.D., assistant professor of anatomy, College of Physicians and Surgeons, Columbia University. The Williams & Wilkins Company, Baltimore, 1953. 775 pp. with index. Illustrated. $9.

A Text-book of Pathology, 6th edition

William Boyd, M.D., F.R.C.P. (Lond.), F.R.C.S.(C), L.L.D. (Sask.), D.Sc. (Man.), M.D. (Oslo), F.R.S.(C), professor of pathology, University of British Columbia. Lea & Febiger, Philadelphia, 1953. 570 illustrations and 32 colored plates. 1024 pp. with index. $12.50.

Communicable Disease Control, 3rd edition

Gaylord W. Anderson, M.D., Dr. P.H., Mayo professor and director, School of Public Health, University of Minnesota; **Margaret G. Arnstein,** R.N., M.P.H., Sc.D. (Hon.), chief, division of nursing resources, United States Public Health Service. The Macmillan Company, New York, 1953. 500 pp. with index. $6.50.

Films in Psychiatry, Psychology and Mental Health

Adolf Nichtenhauser, M.D.; **Marie L. Coleman; David S. Ruhe,** M.D., under the auspices of the Medical Audio-Visual Institute of the Association of American Medical Colleges. Published by Health Education Council, New York, Minneapolis, 1953. 269 pp. with index. Illustrated. $6.

Living With a Disability

Howard A. Rusk, M.D. and **Eugene J. Taylor,** in collaboration with **Muriel Zimmerman,** O.T.R. and **Julia Judson,** M.D., The Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center. The Blakiston Company, Inc., Garden City, N. Y., 1953. 207 pp. with index. $3.50.

Surgical Technique, 5th edition

A. V. Partipilo, M.D., F.A.C.S., associate professor of surgery, The Stritch School of Medicine. Lea & Febiger, Philadelphia, 1953. 704 pp. with index. Illustrated. $15.

Abstracts and Excerpts

Is There a Future Doctor in Your House? "Today's Health," Vol. 31, No. 9:35, September 1953.

A letter written by an anonymous physician to his nephew who is starting his premedical education minimizes the difficulties the boy anticipates in gaining entrance to medical school. Medical school enrollments and facilities have been increasing steadily for several years and are expected to continue to increase. The number of students applying for admission has decreased for the past three years. In 1951-52 medical schools had the largest freshman class in history, the largest total enrollment, the largest graduating class, the greatest increase in teaching facilities and the best financial support ever. Plans are under way in at least 10 states for the establishment of new medical schools or the expansion of present schools.

Only 30 per cent of the freshmen accepted for medical schools last year had "A" averages in premedical work. Some 55 per cent had "B" averages and slightly more than 15 per cent had "C" averages. Most medical schools give important consideration to character, personality, leadership, motivation, health and overall social and emotional development when selecting candidates for admission.

Kelley, Robert W., **The Physician—Guardian of the Individual,** "Mississippi Valley Medical Journal," Vol. 75, No. 5:132-134. September 1953.

The maintenance of the individual as the basic unit of our society is a responsibility which belongs in some measure to the physician. By his close relationship with his patients, the doctor is in a position to function as a guardian of this basic principle. The family doctor particularly is able to serve in this way. He should be concerned with the organization of his local, county and city government, with special reference to the position of medicine in the political economy. He should encourage and support the growth of private charity, and should encourage members of his patient-families to live up to their personal responsibilities. The personal relationship that lies in the practice of medicine cannot be replaced by scientific advances.

Swinyard, Ewart A., **The Use of Audio-Visual Aids in Teaching Pharmacology,** "The American Journal of Pharmaceutical Education," Vol. XVII, No. 3:444-448, July 1953.

Audiovisual aids may be divided into two groups, those of a personal nature such as demonstrations, blackboard notations, etc., and those of an impersonal nature such as motion pictures, slide films, etc. Knowing when to use each is an essential of good teaching. The personal method is desirable if circumstances permit. The personal method is not practical if the size of the class makes close observation impossible, if the principle involved requires equipment not readily available, if clinical procedures and therapeutic uses of drugs must be demonstrated and if good films are the best way to illustrate certain pharmacologic principles.

Certain drawbacks accompany the use of films and film strips. Using them to illustrate points which would be better demonstrated by the instructor tends to discourage spontaneous questions and answers. Sometimes too much material of a related nature is shown to the confusion of the student. Films chosen for subject may not always be timely. If the choice of films is limited, there may be a tendency toward standardization that discourages original teaching. Effective integration into the course is essential.

Film lists may be obtained from the Committee on Audio-Visual Education of the AACP, the American Society for Pharmacology and Experimental Therapeutics, American Medical Association, Medical Audio-Visual Institute of the Association of American Medical Colleges, Medical Film Guild, Veterans Administration and other sources.

Gordon, Joseph, **Health Education via Television,** "Public Health Reports," Vol. 68, No. 8:816-821, August 1953.

The Baltimore City Health Department, in 1951, sent a questionnaire to all TV stations in an effort to evaluate the status of health education via television. Out of 64 questionnaires returned, 28 stated that they were not carrying regular public health education programs but would do so if they were sponsored by a health agency.

Sixteen carried occasional health telecasts in connection with special drives. Only seven produced regular health programs. It is felt that health departments, medical societies and other medical organizations are bypassing opportunities offered by TV for furthering health education.

The experiences of the Baltimore City Health Department in producing a show, "Your Family Doctor," show that it has been a definite aid to promoting better community health. The cooperation of every important health agency in Baltimore, both official and non-official, has been secured. The listening and viewing audience has grown from 20,000 in 1950 to more than 125,000 in 1952. Free literature offered on the program brings an abundant correspondence from viewers.

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Says Military Subsidies Fatal to Research, "Christian Century," 70:827, July 22, 1953.

Schifferes, Justus J., **Medical Research in the U. S. A.,** reprinted by the Health Education Council from "Medical Economics," Vol. 28, No. 10 and 12; Vol. 29, No. 1, 2, 5 and 6.

Garrison, Varnet R., **Programming for Non-Commercial TV,** "College Public Relations Quarterly," Vol. 4, No. 4:16-21, July, 1953.

Saunders, H. Prather, **New Motion Pictures,** "Bulletin of the American College of Surgeons," Vol. 38, No. 5:224-225, September-October 1953.

Medical Motion Pictures Approved by College, "Bulletin of the American College of Surgeons," Vol. 38, No. 5:226-294, September-October 1953.

The Personnel Exchange

Faculty Vacancies

• Applications are invited for positions of assistant or associate professor of MICRO-ANATOMY and GROSS ANATOMY, duties to commence September 1, 1953. Further information may be obtained from Dr. R. L. deC. H. Saunders, anatomy department, Dalhousie University, Halifax, N. S., Can.

• Assistant resident in CLINICAL PATHOLOGY. Approved for entire training by College of American Pathologists; 1,000-bed teaching hospital; modern equipment; laboratory performs over 1,200 tests per day; research laboratories and facilities available; department has own teaching and research programs. Complete maintenance, including room, board, laundry and medical care, plus stipend of $900 per year. Contact director, department of clinical pathology and hospital laboratories, Medical College of Virginia, Richmond 19.

• PSYCHIATRIST: Desired for full-time position as university psychiatrist for student health services and as consultant to outpatient mental hygiene clinic and marriage counseling clinic. Prefer diplomate of American Board of Psychiatry or eligible, with training and experience in dynamic psychotherapy. Some teaching required. Salary open. Address: V-10.

• Board approved two-year residency available in thoracic surgery. University center; East. Requirements: three years approved training in general surgery. Immediate opening. Reply to: Address: V-12.

• PROFESSOR OF PREVENTIVE MEDICINE. Applications are invited for the position of professor of preventive medicine in the faculty of medicine, University of Ottawa, Canada. Requirements: M.D. with specialization in preventive medicine and preferably with teaching experience. Write full details to: V-13 Journal of MEDICAL EDUCATION.

Personnel Available

• BIOCHEMIST: Ph.D., age 26, married. Four years' research on the biochemistry of human arterial smooth muscle, contraction and tonus mechanisms in relation to hypertension and arteriosclerosis. Desires opportunity to continue biochemical research on the arterial wall under cardiovascular investigator, with possibility of study toward M.D. degree. Available October 1953 or June 1954. Address: A-41.

• BIOCHEMIST or PHYSIOLOGIST: Ph.D., age 31. Active researcher and teacher at university medical school for five years. Fine scholastic record, public health senior research fellow, many publications. Interested in position allowing work for M.D. degree. Address: A-43.

• ANATOMIST: 32, married, children. National Cancer Institute fellow (1 year); experience in all branches of anatomy. Publications on request. Interested in research as well as teaching. Excellent references. Available after July 1, 1953. Address: A-44.

• BIOCHEMIST-PHYSIOLOGIST: Man, 30, married, Ph.D. Now assistant professor at medical college. Enthusiastic teacher with several years of research experience. Desires academic position at medical, dental or pharmacy school or liberal arts college where good teaching is considered important. Interested in graduate training program and fundamental research, if available. Administrative duties are very welcome. Publications. Location immaterial. Rank and salary open. Address: A-47.

• TEACHING FELLOWSHIP — OTOLARYNGOLOGY: special interest in problems of tumors in region of head and neck, particularly those related to cancer of mouth, larynx and pharynx. Man, single, 37. M.D. (surgeon) University of Cordoba. Head of clinic and assistant chief, department of otolaryngology, Hospital Espanol, Cordoba, 3 years; intern and resident, U.S., 1949-1951. Member scientific societies. Excellent references. Argentine citizen; good command of English. Address: A-49.

• TEACHING FELLOWSHIP — GYNECOLOGY: Man, 41, married. M.D., University of Cordoba. Supervision of gynecological patients 1939 to present, 2 years teaching in medical school and hospital. Member scientific societies. Publications. Argentine citizen; good command of English. Address: A-50.

• YOUNG SURGEON — Certified general and thoracic boards. University trained. Major interest thoracic and cardiac surgery. Experienced in applied cardio-pulmonary physiology. Some publications. References. Wishes full-time teaching appointment. Address: A-51.

• PHARMACOLOGIST—ADMINISTRATOR: Man, 31 married. Ph. D. Desires academic position, preferably with teaching duties. Four years industrial experience, and five years academic experience. Interest in toxicology and neuropharmacology, and graduate student training. Highest references, publications. Address: A-52.

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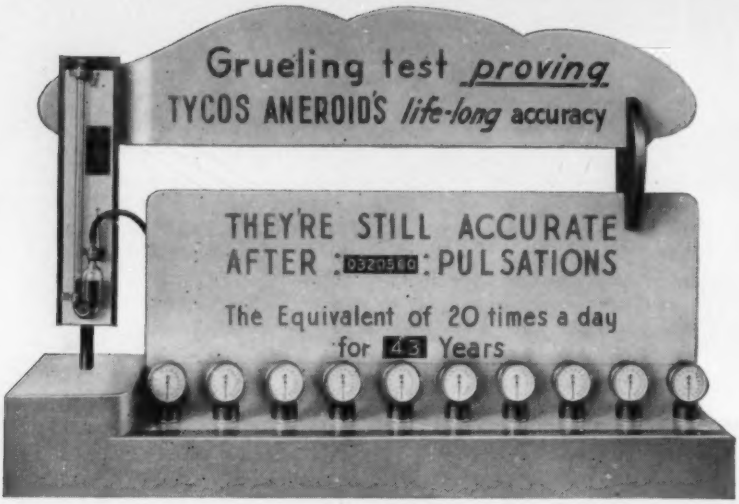

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Information for these columns should reach the Journal office, 185 N. Wabash Ave., Chicago 1, not later than the 10th of the month preceding publication.

• RADIOBIOLOGIST - HISTOLOGIST - ZOOLOGIST: Man, 49, married, Sc.D. Experience mainly in radiobiology and histology. Prefers position in research institution or teaching and research in histology or zoology department with radiobiological research opportunities, or research appointment in department of roentgenology or radiobiology. Address: A-53.

• PARASITOLOGIST: D.Sc., man. Internationally known—widely travelled. Guggenheim fellow. Effective teacher on undergraduate level in zoology, in medical school and postgraduate clinical level. Numerous research papers and monographs in taxonomy of parasites, surveys, chemotherapy and toxicology. Gets on well with colleagues. Desires position in fall. Salary secondary to time for research. Liberal arts college will be considered. Address: A-54.

• ADMINISTRATOR-EDUCATOR: Man, 38; B.S., M.A., Ed.D; fellow, national science-medical societies; 17 years experience administrator national public health-medical organizations; university professional school teaching; 5 years intensive experience medical school organization management including affiliation, curriculum, fellowship and research programs, fund raising, physical development, purchasing, student selection; author six books, numerous papers. Seeks top-level administrative post medical school, foundation, east. Address: A-55.

• Position desired in medical school or university hospital by woman with M.S. in BACTERIOLOGY. Three years experience teaching bacteriology, serology, parasitology and clinical microscopy to medical students and medical laboratory technicians. Excellent experience in writing and statistical interpretations in medical fields. Formerly in charge of university hospital bacteriology and serology department. Address: A-56.

• INTERNIST: 35. Certified. Desires full-time academic appointment with research. Currently assistant professor of medicine, director of basic research laboratory (biochemistry and physiology), supported by several grant foundations. Active in clinical teaching. Research and clinical experience at several leading institutions, including fellowship abroad. Priority IV. More than 40 publications. Address: A-57.

• BIOCHEMIST: Ph.D., 1953. M.S. Analytical chemistry. Desires academic and/or research position. Strong medical science background. Four years diversified teaching experience. Research experience in enzymes, trace metals and histochemistry. Age 32, family, veteran. Sigma Xi, publications. East preferred. Address: A-59.

• A position in PREVENTIVE MEDICINE and PUBLIC HEALTH with administrative responsibility desired. Age 45, married; two children. 13 years extensive experience in administrative medicine, including the teaching of public health and preventive medicine. Broad background in multiple areas of medical and hospital economics. References. Fellow, American Public Health Association; diplomate, American Board of Preventive Medicine and Public Health. Address: A-61

• CHIEF X-RAY TECHNICIAN: White, male, 45 years. 20 years experience, 12 as chief of busy 20-employee department. Capable of assuming complete supervisory responsibility, teaching and general administration duties. Location desired outside New York area. Address: A-62.

• PHYSIOLOGIST: Ph.D. Man, 34. Desires research position. Special training in endocrinology, undergraduate major in veterinary medicine. Experiences in research. Address: A-63

• PATHOLOGIST: M.D. under 40, diplomate. Professor and chairman of department of pathology and chief of diagnostic services; distinguished academic career, varied experience, numerous publications; seeks post as full or associate professor with suitable responsibility and hospital laboratory directorship in progressive medical school. Available June 1954. Own department can be inspected by interested body. Reasons for change: overwork and poor financial return. Address: A-64

• BIOCHEMIST: Ph.D., 1952. Plasma protein fractionation, enzymes, blood coagulation, fibrinogen. Six publications on these topics. Electrophoresis. Five years laboratory teaching experience in medical and dental biochemistry food analysis, blood chemistry. Seeking teaching position with or without facilities for research. Address: A-65

• Active researcher: Member of many scientific organizations. Interest in fields of ENDOCRINE and CARDIOVASCULAR RESEARCH. Ten years research and six years teaching experience. Present position as associate professor in large medical school. Desires change of location. Numerous publications. Excellent recommendations. Minimum salary stipulated. Address: A-66.

• BACTERIOLOGIST: Ph.D. Man. Age 27, married. Veteran. Present rank assistant professor. Would like teeching-research position in medical bacteriology, immunology or bacterial physiology. Teaching experience in liberal arts and medical schools. Prefer location in the west or northwest. Publications. References. Available September 1. Address: A-67.

• BIOCHEMIST: Ph.D. Age 31. Married. B.S. chemistry, biology. Ph.D. biochemistry; minors: chemistry and microbiology. Publications. Three years graduate teaching assistant, two years post doctoral studies, biochemistry and nutrition. Research interests: vitamin and amino acid biochemistry. Desires teaching position in biochemistry with research opportunity or hospital laboratories with professional, financial advancement. Address: A-68.

• BIOCHEMIST: Ph.D. 36. Associate professor with eight years teaching experience in medical biochemistry and three years teaching in immunology. Active research worker with approximately 30 publications in immunochemistry, protein chemistry, enzymology, nutrition, clinical chemistry and analytical chemistry. Experience in teaching postgraduate medical biochemistry. Desires teaching and research position in a medical school or a full-time research appointment at a hospital or other medical research institution. Available at any time in the fall or winter of 1953. Address: A-69.

• PEDIATRICIAN: Board eligible; single woman; 42. Protestant. A.B., M.S. and M.D. Extensive graduate training in hematology morphology and 2 years experience as marrow and blood morphologist in pediatric hematology. Teaching experience: university level-gross anatomy, 2 years; college level-health education, 3 years; high school level-biological science, 5 years. Medical practice: large university students' health service, 3 years; private practice, 1 year. 8 publications. Address: A-70.

• PHYSIOLOGIST: Male, married. Teaching and research experience. Numerous publications. Ph. D. Background in organic chemistry and biochemistry. Research interests in mammalian and human physiology. Interested in full-time academic position. Address: A-71.

• PHARMACOLOGIST: Man, 32. Family. B. S., pharmacy. M.S., Ph.D. pharmacology. Minors: biochemistry and physiology. Two years graduate assistant. One year E. I. Lilly fellow; for the second year National Institutes of Health predoctoral research fellow. Publications and research. Desires position with a medical school department of pharmacology. Time and financial aspects are of secondary importance. Interested particularly in a position that will provide a sound basis for future academic advancement. Available after June 1954. Address: A-72.

• UROLOGIST and SURGEON: Age 49, active research worker. Experienced teacher in physiology and urology desires teaching in both subjects and research position in medical school. 42 published papers and lectures and one book. Position should be permanent. East or West coast preferred. Available immediately. Address: A-73.

• ANATOMIST: Man. South American. Age 44, M.D. University of Paris. Languages: Spanish, French and English. Teaching experience in gross anatomy, 15 years. Head and professor of the department of anatomy since 1951. Publications. Educational awards. Seeking full-time position as professor or assistant professor of gross anatomy in any school but prefers a New England or West Coast medical school. Available: March 1, 1954. Address: A-74.

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• RESEARCHERS Man. Age 35. Family. Research associate and assistant. Interested in university offering research opportunity connected with teaching pharmacology. Experience largely in research with some teaching. Available for position on short notice. Publications and references. Address: A-77.

• SURGEON: 35. Seven years surgical training and teaching at the University of Goettingen, Germany. Experience in research and publications both in Europe and USA. Anticipating completion of American Board of Surgery requirements in June 1954. Wishes to resume academic career. Special interest in surgical physiology. Address: A-78.

• PHYSIOLOGIST or BIO-PHYSICIST: Man, 31, married. M.S., Ph.D. Desires academic position with freedom of research, or research position in field of interest. Active researcher, many publications, special experience in radioactive isotope methods, bone mineral turnover, circulatory dynamics, burn-shock. One and one-half years predoctoral teaching experience. Broad education in biology and various fields of physiology. Address: A-79.

• BIOCHEMIST: Ph.D. 36. Associate professor in large medical college with distinguished record in research on peptides, amino acids, hormones and antibiotics. Has taught biochemistry in two medical colleges; elementary and advanced courses in university. Desires position in a medical college, preferably with opportunity to direct graduate students in biochemistry, in research institute or in university. Address: A-80.

• M.D., DR. P. H. interested in teaching in medical or public health school. Fifteen years' experience includes general public health administration, industrial hygiene, epidemiology, immunology and basic and applied research; also some undergraduate and postgraduate teaching. Publications. Excellent references. Available on short notice. Address: A-81.

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